ttcttttttt aaatgtaagg accaaacttc taaactaatt gttcttttgt tgctttaatt
2100
tttaaaaatt acattcttct gatgtaacat gtgatacata caaaagaata tagtttaata
2160
tgtattgaaa taaaacacaa taaaattaac acttgaaaaa aaaaaaaaaa aaaaaa
2216

<210> 5832
<211> 322
<212> PRT
<213> Homo sapiens

<400> 5832
Gly Leu Glu Pro Gly Ile Gln Ile Gln Glu Glu Val Asn Ile Pro Asn
1   5   10   15
Arg Arg Val Leu Val Thr Gly Ala Thr Gly Leu Leu Gly Arg Ala Val
            20   25   30
His Lys Glu Phe Gln Gln Asn Asn Trp His Ala Val Gly Cys Gly Phe
        35   40   45
Arg Arg Ala Arg Pro Lys Phe Glu Gln Val Asn Leu Leu Asp Ser Asn
    50   55   60
Ala Val His His Ile Ile His Asp Phe Gln Pro His Val Ile Val His
65   70   75   80
Cys Ala Ala Glu Arg Arg Pro Asp Val Val Glu Asn Gln Pro Asp Ala
                85   90   95
Ala Ser Gln Leu Asn Val Asp Ala Ser Gly Asn Leu Ala Lys Glu Ala
            100   105   110
Ala Ala Val Gly Ala Phe Leu Ile Tyr Ile Ser Ser Asp Tyr Val Phe
        115   120   125
Asp Gly Thr Asn Pro Pro Tyr Arg Glu Glu Asp Ile Pro Ala Pro Leu
    130   135   140
Asn Leu Tyr Gly Lys Thr Lys Leu Asp Gly Glu Lys Ala Val Leu Glu
145   150   155   160
Asn Asn Leu Gly Ala Ala Val Leu Arg Ile Pro Ile Leu Tyr Gly Glu
                165   170   175
Val Glu Lys Leu Glu Glu Ser Ala Val Thr Val Met Phe Asp Lys Val
            180   185   190
Gln Phe Ser Asn Lys Ser Ala Asn Met Asp His Trp Gln Gln Arg Phe
        195   200   205
Pro Thr His Val Lys Asp Val Ala Thr Val Cys Arg Gln Leu Ala Glu
    210   215   220
Lys Arg Met Leu Asp Pro Ser Ile Lys Gly Thr Phe His Trp Ser Gly
225   230   235   240
Asn Glu Gln Met Thr Lys Tyr Glu Met Ala Cys Ala Ile Ala Asp Ala
                245   250   255
Phe Asn Leu Pro Ser Ser His Leu Arg Pro Ile Thr Asp Ser Pro Val
                260   265   270
Leu Gly Ala Gln Arg Pro Arg Asn Ala Gln Leu Asp Cys Ser Lys Leu
            275   280   285
Glu Thr Leu Gly Ile Gly Gln Arg Thr Pro Phe Arg Ile Gly Ile Lys
        290   295   300
Glu Ser Leu Trp Pro Phe Leu Ile Asp Lys Arg Trp Arg Gln Thr Val
305   310   315   320
Phe His

<210> 5833
<211> 805
<212> DNA
<213> Homo sapiens

<400> 5833
aagcttgcag cagcacaggg acaggcaccc ttggagccca cccaagatgg gagtgccatt
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gaaacatgtc caaaaggaga cgagccaaga ggtgacgagc aacaggtgga aagtatgacc
120
cctaaacctg tgctccagga agaaaacaac caagagtctt ttattgcatt tgctcgggtg
180
ttcagtggtg tggctcgaag aggaaagaaa attttttgtct tggggcccaa atacagtcct
240
cttgagtttt tacgaagggt accattaggc ttctcagctc accagatggg cctcccccaa
300
gtcccccaca tggcatactg tgctctggaa aacctgtatc ttctgatggg aagggaactg
360
gaatatctag aggaggtacc tccaggaaat gtgctaggaa taggaggcct tcaagatttt
420
gtgctgaaat ctgcaacact gtgtagcctg ccatcctgcc caccatttat accactcaac
480
ttcgaagcca ctcctattgt gagagttgct gttgaaccaa acatccaag tgaaatgcct
540
cagctcgtaa aaggaatgaa actgttaaac caggctgatc cctgtgtcca gattttaatt
600
caggaaacgg gagagcacgt tttagtcaca gcaggagaag tccaccttca gcgatgcctg
660
gatgacttaa agaaaggtt tgcaaagatt catatcagtg tatctgaacc tattattcca
720
ttcagagaaa caatcacaaa accccccaaaa gttgacatgg tcaatgaaga aataggcaaa
780
cagcaaaaag ttgcagtcat acacc
805

<210> 5834
<211> 268
<212> PRT
<213> Homo sapiens

<400> 5834
Lys Leu Ala Ala Ala Gln Gly Gln Ala Pro Leu Glu Pro Thr Gln Asp
 1   5   10   15
Gly Ser Ala Ile Glu Thr Cys Pro Lys Gly Asp Glu Pro Arg Gly Asp
            20   25   30
Glu Gln Gln Val Glu Ser Met Thr Pro Lys Pro Val Leu Gln Glu Glu
        35   40   45
Asn Asn Gln Glu Ser Phe Ile Ala Phe Ala Arg Val Phe Ser Gly Val
    50   55   60
Ala Arg Arg Gly Lys Lys Ile Phe Val Leu Gly Pro Lys Tyr Ser Pro
65   70   75   80
Leu Glu Phe Leu Arg Arg Val Pro Leu Gly Phe Ser Ala Pro Pro Asp

```
                    85                    90                    95
Gly Leu Pro Gln Val Pro His Met Ala Tyr Cys Ala Leu Glu Asn Leu
               100                   105                   110
Tyr Leu Leu Met Gly Arg Glu Leu Glu Tyr Leu Glu Glu Val Pro Pro
               115                   120                   125
Gly Asn Val Leu Gly Ile Gly Gly Leu Gln Asp Phe Val Leu Lys Ser
           130                   135                   140
Ala Thr Leu Cys Ser Leu Pro Ser Cys Pro Pro Phe Ile Pro Leu Asn
145                   150                   155                   160
Phe Glu Ala Thr Pro Ile Val Arg Val Ala Val Glu Pro Lys His Pro
                   165                   170                   175
Ser Glu Met Pro Gln Leu Val Lys Gly Met Lys Leu Leu Asn Gln Ala
               180                   185                   190
Asp Pro Cys Val Gln Ile Leu Ile Gln Glu Thr Gly Glu His Val Leu
           195                   200                   205
Val Thr Ala Gly Glu Val His Leu Gln Arg Cys Leu Asp Asp Leu Lys
       210                   215                   220
Glu Arg Phe Ala Lys Ile His Ile Ser Val Ser Glu Pro Ile Ile Pro
225                   230                   235                   240
Phe Arg Glu Thr Ile Thr Lys Pro Pro Lys Val Asp Met Val Asn Glu
                   245                   250                   255
Glu Ile Gly Lys Gln Gln Lys Val Ala Val Ile His
           260                   265
```

```
<210> 5835
<211> 420
<212> DNA
<213> Homo sapiens

<400> 5835
nngctggagc agcgctgggg tttcggcctg gaggagttgt acggcctggc actgcgcttc
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ttcaaagaaa aagatggcaa agcatttcat ccaacttatg aagaaaaatt gaagcttgtg
120
gcactgcata agcaagttct tatgggccca tataatccag acacttgtcc tgaggttgga
180
ttctttgatg tgttggggaa tgacaggagg agagaatggg cagccctggg aaacatgtct
240
aaagaggatg ccatggtgga gtttgtcaag ctcttaaata ggtgttgcca tctcttttca
300
acatatgttg cgtcccacaa aatagagaag gaagagcaag acaaaaaaag gaaggaggaa
360
gaggagcgaa ggcggcgtga agaggaagaa agagaacgtc tgcaaaagga ggaagagaaa
420
```

```
<210> 5836
<211> 140
<212> PRT
<213> Homo sapiens

<400> 5836
Xaa Leu Glu Gln Arg Trp Gly Phe Gly Leu Glu Glu Leu Tyr Gly Leu
 1               5                   10                   15
Ala Leu Arg Phe Phe Lys Glu Lys Asp Gly Lys Ala Phe His Pro Thr
```

```
                    20                    25                    30
Tyr Glu Glu Lys Leu Lys Leu Val Ala Leu His Lys Gln Val Leu Met
            35                    40                    45
Gly Pro Tyr Asn Pro Asp Thr Cys Pro Glu Val Gly Phe Phe Asp Val
    50                    55                    60
Leu Gly Asn Asp Arg Arg Arg Glu Trp Ala Ala Leu Gly Asn Met Ser
65                    70                    75                    80
Lys Glu Asp Ala Met Val Glu Phe Val Lys Leu Leu Asn Arg Cys Cys
                85                    90                    95
His Leu Phe Ser Thr Tyr Val Ala Ser His Lys Ile Glu Lys Glu Glu
            100                   105                   110
Gln Asp Lys Lys Arg Lys Glu Glu Glu Glu Arg Arg Arg Arg Glu Glu
        115                   120                   125
Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
    130                   135                   140
```

```
<210> 5837
<211> 582
<212> DNA
<213> Homo sapiens

<400> 5837
nnccgtcttt caccatttct accccacgac cacctcggct tggctgtctt ctccatgctg
60
tgttgtttct ggcccgttgg catcgctgcc ttctgtctag cccagaagac caacaaggct
120
tgggccaagg gggacatcca gggggcaggg gccgcctccc gccgtgcctt cctgctgggg
180
gtcctcgccg tcgggctggg cgtgtgcacg tatgcggctg ccctggtgac cctggccgcc
240
taccttgcct cccgagaccc gccctagttg cccctacagc cctcactgtg aaccctgagg
300
ccggcagccc agcaaatctg tgggcagaga gtggagaatc ttggtggatg aggctgcggc
360
ggcggcagga gcatctagaa acgggagcga gctggactgg aaccccttccc cttcctggcc
420
accgctcttc gggcggcagc aacctgagat taaacaccag acacccttgg cctgggctca
480
cgaggaaggg gctgcagttc tccaaggatt cccgcctgct cccagatccc cgggagtcgt
540
aggaacccgt tcctggacgc tgacgtcggc tttcagggat cc
582
```

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<210> 5838
<211> 88
<212> PRT
<213> Homo sapiens

<400> 5838
Xaa Arg Leu Ser Pro Phe Leu Pro His Asp His Leu Gly Leu Ala Val
1               5                   10                  15
Phe Ser Met Leu Cys Cys Phe Trp Pro Val Gly Ile Ala Ala Phe Cys
            20                  25                  30
Leu Ala Gln Lys Thr Asn Lys Ala Trp Ala Lys Gly Asp Ile Gln Gly
```

```
         35                    40                    45
Ala Gly Ala Ala Ser Arg Arg Ala Phe Leu Leu Gly Val Leu Ala Val
     50                    55                    60
Gly Leu Gly Val Cys Thr Tyr Ala Ala Ala Leu Val Thr Leu Ala Ala
65                    70                    75                    80
Tyr Leu Ala Ser Arg Asp Pro Pro
                   85
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<210> 5839
<211> 1895
<212> DNA
<213> Homo sapiens

<400> 5839
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tttttttttt tttaacaata aaatagctct ttgtttattc actttgattt ggatcattgg
60
aaatattaaa caataaataa aacagagcgg gggctgagga aagcaggatc ttgctgaagt
120
cattcgaatg catcccaacc agtgctcagc tgcgtaacga catggagaga ggcagggggg
180
aatagaaagc aaatttaaaa acaccaacac ccaaacacac aagactgcac acaagaaaaa
240
gtgctcaaga aactttggct ttgaagggaa ttcagtgaag ggaagcgatt gtgcaggagg
300
aagggaagaa acccacgatc accctaaggg gcggggggct ggagggcgag gccctgagac
360
aggctagggt taaagctgac gtcccacagc tcaggacgta caaccgatgg cagttttgta
420
ctaggaagaa gctgagtgat gaggctgggt gatgggatcg cttgacgggc tgggagggag
480
gacaggaggt gtaaaggtgg ctcaccttcc cctaggaaat tcagtgctct tttggtaaga
540
aaaaatagtc ggtaatgccc tgatcctgac aagctgtgag atgctgtctt gcctgtctct
600
gccttttctt ctaagttttc ctccttttct ttgcacaggt gtcaggtagc accccagggg
660
tgcaggagct ggtgttttca tgacaaacaa aaatggggag gttgactcta tctcaaaact
720
agctagccca gtccacaggg caggataatc ctgatggcgt gtagccacat ttgctgcaaa
780
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840
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900
cgaggctcgg gcttccctgc acaaggtatt tttgatcctt gccagcggag ggagagagag
960
ttatcttggt ttccttttca cttgttttcg ggctgcttca aagcaaacat cccagttcca
1020
aatgttcttt gtggtttgaa tcctggcaga ggccagggtc acatccaagt gggactggcc
1080
tctagcacca ccttctggcc acagcagaga atgggattcc atcaaagcct ctcaaccagc
1140
cgtttcccta aagaatcacc cagatcttaa ctgccctctc caccttcttt tttttttcccc
1200
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tcctattttta cattctattt tctcatatcc agcttttctc tctaagccta accaaatgct
1260

ttggtgaatg atgcttggaa aagctggagt tttaaaaggc attcatccat ttatgaactt
1320

tcttccagcc caggatccct gcagagaacc agaggttaca aatctgccct cctttctccc
1380

ctaaaaggtg gctgagggga ggagaggtgc atgtagctcc agctatagca aatcagtgcc
1440

ctgactcact ggggagaccc aggggttgg gatgttgctg acacctcatg ggccacctca
1500

tcagcccatc tttgtagctt caggttcagc tctgggtgct gcaggcaggg accctctgc
1560

tccctgcctg aatgcagggc cagtctccaa ggaactctgt ctgcagagta gaaagagctg
1620

tgggctggga atcaggggcc tgagggagcc cctgccactg cctgcccaga accagtgctc
1680

ctcattctcc tgctgacagc atgcatgtgc cttttggcta acacacactc ttgtctaatt
1740

cccagccacc ttcaccccag ggatgagttc cagttggttt aagccagact ggtgcattta
1800

attctggctg caacaactgg attctgttaa gtgcccattg ctaagccaat gagctatctg
1860

ctgggctgtg ggaaagagaa atgcagtctc ntata
1895

<210> 5840
<211> 138
<212> PRT
<213> Homo sapiens

<400> 5840
Met Ala Cys Ser His Ile Cys Cys Lys Pro Asp Val Cys Asp Gly Tyr
1   5   10   15
Asn Asp Thr Pro Gly Ala Leu Leu Arg Gly Glu Asp Arg Cys Trp Phe
            20   25   30
Leu Met Val His Gly Trp Cys Pro Val Ile Phe Ser Trp Ala Val Ala
        35   40   45
Pro Arg Gly Ser Gly Phe Pro Ala Gln Gly Ile Phe Asp Pro Cys Gln
    50   55   60
Arg Arg Glu Arg Glu Leu Ser Trp Phe Pro Phe His Leu Phe Ser Gly
65   70   75   80
Cys Phe Lys Ala Asn Ile Pro Val Pro Asn Val Leu Cys Gly Leu Asn
                85   90   95
Pro Gly Arg Gly Gln Gly His Ile Gln Val Gly Leu Ala Ser Ser Thr
            100   105   110
Thr Phe Trp Pro Gln Gln Arg Met Gly Phe His Gln Ser Leu Ser Thr
        115   120   125
Ser Arg Phe Pro Lys Glu Ser Pro Arg Ser
    130   135

<210> 5841
<211> 3411
<212> DNA
<213> Homo sapiens

<400> 5841

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tggaggcggg agatggaacg cccccacccct ccctcgacac tttggggcca tgaaaaccca
120
ttctcggacc ttcccagcgg caccctcaat tttcacccgg tgtggacatc tcgaacttgc
180
tcccgcccac ccttctgtct ctctcaaata gtacagctta aagcaataaa tgtagatctt
240
caaagtgatg ctgctctgca ggtggacatt tctgatgctc ttagtgagcg ggataaagta
300
aaattcactg ttcacacaaa gagttcattg ccaaatttta aacaaaacga gttttcagtt
360
gttcggcaac atgaggaatt tatctggctt catgattcct ttgttgaaaa tgaagactat
420
gcaggttata tcattccacc agcaccacca agacctgatt ttgatgcttc aagggaaaaa
480
ctacagaagc ttggtgaagg agaagggtca atgacgaagg aagaattcac aaagatgaaa
540
caggaactgg aagctgaata tttggcaata ttcaagaaga cagttgcgat gcatgaagtg
600
ttcctgtgtc gtgtggcagc acatcctatt ttgagaagag atttaaattt ccatgtcttc
660
ttggaatata atcaagattt gagtgtgcga ggaaaaaata aaaaagagaa acttgaagac
720
ttctttaaaa acatggttaa atcagcagat ggagtaatcg tttcaggagt aaaggatgta
780
gatgatttct ttgagcacga acgaacattt cttttggaat atcataaccg agttaaggat
840
gcatctgcta aatctgatag aatgacaaga tcccacaaaa gtgctgcaga tgattacaat
900
agaattggtt cttcattata tgctttagga actcaggatt ctacagatat atgcaagttt
960
tttctcaaag tttcagaact gttcgataaa acaagaaaaa tagaagcacg agtgtctgct
1020
gatgaagacc tcaaactttc tgatctttta aaatattact taagagaatc tcaagctgct
1080
aaggatctcc tgtatcgaag gtctaggtca ctagtggatt atgaaaatgc taataaagca
1140
ctggataaag caagagcaaa aaataaagat gttctacagg ccgaaacttc ccaacaatta
1200
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1260
acaagaagag ttgctgcatt cagaaaaaat ttagtggaac tggcagagtt agaactgaag
1320
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1380
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1440
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1500
gcatcaactc ctcttttttct gagaaacatg gagcagcgca cgcccaggcg atgccagtct
1560

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gtgtgccgtg atgccgcact gtgttcccca tgacagtggt ccatcatcgt gcactcgtca
1620
tactcagaag tccaaagttc attcttcttt aaagtagcct ctataactct gtttatttta
1680
taaatagtat tccttatggc tgccactctt atttaccttt aaataatttc tgaaatttaa
1740
ccttttcaga atgcattgtt gaaacaagat aaagattgcc tttttgaat tttttaaatt
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1860
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1920
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1980
gactaaacca agtattgtaa aataaacagc gataacagtg atagttttta actctatggt
2040
cattgtatca ctctggaaaa tgtggagtag ctgtaataaa tctactcctg tattatgctt
2100
tacagtgcag gtcttagttt ttctttttc tcatttcttt tgaaatggca tctcgaacaa
2160
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2280
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2400
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2460
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2520
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2580
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2640
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2700
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2880
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2940
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3000
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3060
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3120
agaaatacta agtatagggc cagaagctat acagtgtttc acttaaccgt ttgccattct
3180
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5008

gtatttacca aggtggtctt ttctggggaa ggaagtagag tggaaggtgc atcccttggc
3240
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3300
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3360
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3411

<210> 5842
<211> 460
<212> PRT
<213> Homo sapiens

<400> 5842
Xaa Ala Phe Trp Trp Thr Ser Thr Pro Thr Arg Gly Gly Val Gln Val
1   5   10   15
Ala Lys Trp Lys Trp Arg Arg Glu Met Glu Arg Pro His Pro Pro Ser
            20   25   30
Thr Leu Trp Gly His Glu Asn Pro Phe Ser Asp Leu Pro Ser Gly Thr
        35   40   45
Leu Asn Phe His Pro Val Trp Thr Ser Arg Thr Cys Ser Arg Pro Pro
    50   55   60
Phe Cys Leu Ser Gln Ile Val Gln Leu Lys Ala Ile Asn Val Asp Leu
65   70   75   80
Gln Ser Asp Ala Ala Leu Gln Val Asp Ile Ser Asp Ala Leu Ser Glu
                85   90   95
Arg Asp Lys Val Lys Phe Thr Val His Thr Lys Ser Ser Leu Pro Asn
            100   105   110
Phe Lys Gln Asn Glu Phe Ser Val Val Arg Gln His Glu Glu Phe Ile
        115   120   125
Trp Leu His Asp Ser Phe Val Glu Asn Glu Asp Tyr Ala Gly Tyr Ile
    130   135   140
Ile Pro Pro Ala Pro Pro Arg Pro Asp Phe Asp Ala Ser Arg Glu Lys
145   150   155   160
Leu Gln Lys Leu Gly Glu Gly Glu Gly Ser Met Thr Lys Glu Glu Phe
                165   170   175
Thr Lys Met Lys Gln Glu Leu Glu Ala Glu Tyr Leu Ala Ile Phe Lys
        180   185   190
Lys Thr Val Ala Met His Glu Val Phe Leu Cys Arg Val Ala Ala His
        195   200   205
Pro Ile Leu Arg Arg Asp Leu Asn Phe His Val Phe Leu Glu Tyr Asn
    210   215   220
Gln Asp Leu Ser Val Arg Gly Lys Asn Lys Lys Glu Lys Leu Glu Asp
225   230   235   240
Phe Phe Lys Asn Met Val Lys Ser Ala Asp Gly Val Ile Val Ser Gly
            245   250   255
Val Lys Asp Val Asp Asp Phe Phe Glu His Glu Arg Thr Phe Leu Leu
            260   265   270
Glu Tyr His Asn Arg Val Lys Asp Ala Ser Ala Lys Ser Asp Arg Met
        275   280   285
Thr Arg Ser His Lys Ser Ala Ala Asp Asp Tyr Asn Arg Ile Gly Ser
    290   295   300
Ser Leu Tyr Ala Leu Gly Thr Gln Asp Ser Thr Asp Ile Cys Lys Phe

```
305                    310                    315                    320
Phe Leu Lys Val Ser Glu Leu Phe Asp Lys Thr Arg Lys Ile Glu Ala
                    325                    330                    335
Arg Val Ser Ala Asp Glu Asp Leu Lys Leu Ser Asp Leu Leu Lys Tyr
                    340                    345                    350
Tyr Leu Arg Glu Ser Gln Ala Ala Lys Asp Leu Leu Tyr Arg Arg Ser
                    355                    360                    365
Arg Ser Leu Val Asp Tyr Glu Asn Ala Asn Lys Ala Leu Asp Lys Ala
            370                    375                    380
Arg Ala Lys Asn Lys Asp Val Leu Gln Ala Glu Thr Ser Gln Gln Leu
385                    390                    395                    400
Cys Cys Gln Lys Phe Glu Lys Ile Ser Glu Ser Ala Lys Gln Glu Leu
                    405                    410                    415
Ile Asp Phe Lys Thr Arg Arg Val Ala Ala Phe Arg Lys Asn Leu Val
                    420                    425                    430
Glu Leu Ala Glu Leu Glu Leu Lys His Ala Lys Gly Asn Leu Gln Leu
            435                    440                    445
Leu Gln Asn Cys Leu Ala Val Leu Asn Gly Asp Thr
        450                    455                    460
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<210> 5843
<211> 6446
<212> DNA
<213> Homo sapiens

<400> 5843
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cggttcatcg ctgtggagca ggagtttttc cggctgtggt gggatggcgt cgcctcggac
120
cagcagaaat accaggtccg ccagctcctg gaggaaggac gcctggaatt tgtcatcgga
180
ggccaggtca tgcatgacga ggctgtgacg caccttgatg accagatcct gcagctcaca
240
gaaggacacg ggtttctcta tgaaacattt gggatccggc cacagttctc ctggcacgtt
300
gacccgtttg gcgcctctgc cacgacgccc accctatttg cgctggcggg cttcaatgcc
360
cacctcggct cccggatcga ctacgacctg aaggcagcca tgcaggaggc cggggggctg
420
cagttcgtgt ggcgagggtc cccatccctc tcagagcggc aggaaatctt cacgcacatc
480
atggaccagt acagctactg caccccgtcc cacatccctt tctccaacag gtcaggattt
540
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<212> PRT
<213> Homo sapiens

<400> 5844

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Ala Leu Ala Gly Phe Asn Ala His Leu Gly Ser Arg Ile Asp Tyr Asp
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Leu Lys Ala Ala Met Gln Glu Ala Arg Gly Leu Gln Phe Val Trp Arg
    50                  55                  60
Gly Ser Pro Ser Leu Ser Glu Arg Gln Glu Ile Phe Thr His Ile Met
65                  70                  75                  80
Asp Gln Tyr Ser Tyr Cys Thr Pro Ser His Ile Pro Phe Ser Asn Arg
                85                  90                  95
Ser Gly Phe Tyr Trp Asn Gly Val Ala Val Phe Pro Lys Pro Pro Pro
            100                 105                 110
Asp Gly Val Tyr Pro Asn Met Ser Glu Pro Val Thr Pro Ala Asn Ile
            115                 120                 125
Asn Leu Tyr Ala Glu Ala Leu Val Ala Asn Val Lys Gln Arg Ala Ala
    130                 135                 140
Trp Phe Arg Thr Pro His Val Leu Trp Pro Trp Gly Cys Asp Lys Gln
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Phe Phe Asn Ala Ser Val Gln Phe Ala Asn Met Asp Pro Leu Leu Asp
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Gln Ala Trp Thr Gly Phe Tyr Thr Ser Arg Ser Ser Leu Lys Gly Leu
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Ala Arg Arg Ala Ser Ala Leu Leu Tyr Ala Gly Glu Ser Met Phe Thr
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Leu Gln Gln Leu Gln Gln Leu Arg Trp Ala Val Ser Glu Val Gln His
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His Asp Ala Ile Thr Gly Thr Glu Ser Pro Lys Val Arg Asp Met Tyr
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Ala Thr His Leu Ala Ser Gly Met Leu Gly Val Arg Lys Leu Met Ala
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Ser Ile Val Leu Asp Glu Leu Gln Pro Gln Ala Pro Met Ala Ala Ser
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Ser Asp Ala Gly Pro Ala Gly His Phe Ala Ser Val Tyr Asn Pro Leu
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Ala Trp Thr Val Thr Thr Ile Val Thr Leu Thr Val Gly Phe Pro Gly
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Val Arg Val Thr Asp Glu Ala Gly His Pro Val Pro Ser Gln Ile Gln
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Ala Gln Glu Gly Thr Gln Glu Pro Ala Ala Thr Val Ala Ser Thr Leu
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Gln Phe Gly Arg Arg Leu Arg Arg Arg Thr Ser His Ala Gly Arg Tyr
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Leu Val Pro Val Ala Asn Asp Cys Tyr Ile Val Leu Leu Asp Gln Asp
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Thr Asn Leu Met His Ser Ile Trp Glu Arg Gln Ser Asn Arg Thr Val
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Arg Val Thr Gln Glu Phe Leu Glu Tyr His Val Asn Arg Asp Val Lys
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Gln Gly Pro Ile Ser Asp Asn Tyr Leu Phe Thr Pro Gly Lys Ala Ala
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Val Pro Ala Trp Glu Ala Val Glu Met Glu Ile Val Ala Gly Gln Leu
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Val Thr Glu Ile Arg Gln Tyr Phe Tyr Arg Asn Met Thr Ala Gln Asn
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Tyr Thr Tyr Ala Ile Arg Ser Arg Leu Thr His Val Pro Gln Gly His
545                      550                      555                  560
Asp Gly Glu Leu Leu Cys His Arg Ile Glu Gln Glu Tyr Gln Ala Gly
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Pro Leu Glu Leu Asn Arg Glu Ala Val Leu Arg Thr Ser Thr Asn Leu
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Tyr Pro Met Val Gln Ser Ala Phe Met Glu Asp Gly Lys Ser Arg Leu
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Val Leu Leu Ser Glu Arg Ala His Gly Ile Ser Ser Gln Gly Asn Gly
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Gln Val Glu Val Met Leu His Arg Arg Leu Trp Asn Asn Phe Asp Trp
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Asp Leu Gly Tyr Asn Leu Thr Leu Asn Asp Thr Ser Val Val His Pro
        675                  680                  685
Val Leu Trp Leu Leu Leu Gly Ser Trp Ser Leu Thr Thr Ala Leu Arg
    690                  695                  700
Gln Arg Ser Ala Leu Ala Leu Gln His Arg Pro Val Val Leu Phe Gly
705                  710                  715                  720
Asp Leu Ala Gly Thr Ala Pro Lys Leu Pro Gly Pro Gln Gln Gln Glu
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Ala Val Thr Leu Pro Pro Asn Leu His Leu Gln Ile Leu Ser Ile Pro
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Gly Trp Arg Tyr Ser Ser Asn His Thr Glu His Ser Gln Asn Leu Arg
        755                  760                  765
Lys Gly His Arg Gly Glu Ala Gln Ala Asp Leu Arg Arg Val Leu Leu
    770                  775                  780
Arg Leu Tyr His Leu Tyr Glu Val Gly Glu Asp Pro Val Leu Ser Gln
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<212> DNA
<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

<400> 5846
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Ser Ala Ile Glu Ala Met Lys Lys Ala Tyr Gln Glu Glu Leu Ser Arg
    50   55   60
Glu Leu Ser Lys Thr Arg Ser Leu Gln Gln Gly Pro Asp Gly Leu Arg
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Lys Gln His Gln Ser Asp Val Glu Ala Leu Lys Arg Glu Leu Gln Val
                85   90   95
Leu Ser Glu Gln Tyr Ser Gln Lys Cys Leu Glu Ile Gly Ala Leu Met
            100   105   110
Arg Gln Ala Glu Glu Arg Glu His Thr Leu Arg Arg Cys Gln Gln Glu
        115   120   125
Gly Gln Glu Leu Leu Arg His Asn Gln Glu Leu His Gly Arg Leu Ser
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Glu Glu Ile Asp Gln Leu Arg Gly Phe Ile Ala Ser Gln Gly Met Gly
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Asn Gly Cys Gly Arg Ser Asn Glu Arg Ser Ser Cys Glu Leu Glu Val
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Leu Leu Arg Val Lys Glu Asn Glu Leu Gln Tyr Leu Lys Lys Glu Val
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Gln Cys Leu Arg Asp Glu Leu Gln Met Met Gln Lys Asp Lys Arg Phe
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Thr Ser Gly Lys Tyr Gln Asp Val Tyr Val Glu Leu Ser His Ile Lys

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<212> DNA
<213> Homo sapiens

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720
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780
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900
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1021
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<210> 5848
<211> 120
<212> PRT
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<213> Homo sapiens

<400> 5848
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Gly Thr Ser Ser Cys Gly Arg Val Arg Ala Cys Gly Arg Ile His His
1               5                   10                  15
Asn Met Ala Asn Leu Phe Ile Arg Lys Met Val Asn Pro Leu Leu Tyr
            20                  25                  30
Leu Ser Arg His Thr Val Lys Pro Arg Ala Leu Ser Thr Phe Leu Phe
        35                  40                  45
Gly Ser Ile Arg Gly Ala Ala Pro Val Ala Val Glu Pro Gly Ala Ala
    50                  55                  60
Val Arg Ser Leu Leu Ser Pro Gly Leu Leu Pro His Leu Leu Pro Ala
65                  70                  75                  80
Leu Gly Phe Lys Asn Lys Thr Val Leu Lys Lys Arg Cys Lys Asp Cys
                85                  90                  95
Tyr Leu Val Lys Arg Arg Gly Arg Trp Tyr Val Tyr Cys Lys Thr His
            100                 105                 110
Pro Arg His Lys Gln Arg Gln Met
        115                 120
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<210> 5849
<211> 3174
<212> DNA
<213> Homo sapiens

<400> 5849
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120
aaaaatctca agaccacagg acagcgtgag ccccacccccc ctcccccaat gaccccagca
180
tgcggtaatg ccaggcgggt ggccctgggg catgcggggg ggagtgatgc atggaaggaa
240
aagccaccgg ccatggaaat tagtacagaa ccccccccaca cacactcaga cacaggatac
300
agggtggacg acacctagcc ggggtgggaa ggatgggaat tgaaacccac acagcctgct
360
gttagaggga ggggagtggg gagctcctag cccctgttca actacatggt aggggggggc
420
actctctccc cagaaggaaa agggtttgtt ccctcagggt ccctgctgga ccaagcccat
480
ctcttaccca gcctgggcag ggggctctgc cctgagggcg ggccaaggaa caatggggaa
540
gtttatgtgg acaaaccagt tcccaagcta cttcccactt ctccctcctc caaccagaag
600
gggggaaaag ggagaggcca cagggcaaag agtgtattag ggcctgagct gcagctgcct
660
ctcagaaggg agagtggccc acagccttcc tcccttcacc ttcagcccac tccccagact
720
gcatctggaa gcggctagag gcctgctgag atcctcctct ccctctggcc tcctctcgga
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840
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gccaaaawyy mmttggcttt ttaaaaaata atcacaattt gtgggttaaa aaccaatttg
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960
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1020
aaccagtcct gggtactaac tacccaaatg tgggatggct cctcttggga agagggtagg
1080
ggacatgtcc agcaagtgcc agagaacttg gctcagggtc aactccaccc cgtgtcagtc
1140
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1200
gcatmgaggg gggacggtac atctctttag gatgtagacc aggcaggtgg gcacactggc
1260
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1320
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1440
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1980
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2040
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2100
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2160
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2220
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2280
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2340
cctctgcctg cctggcccac caagcttccc aagccccaac ccccagcagc cgtccatttg
2400
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2460

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2580
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2700
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2760
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2820
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2880
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2940
agctgatccc agttgaattg ttatacttaa aaggatccga attgctaagt tccccatttt
3000
tgtgtttaa tgacttggat cttcgagggg aattggggtt ctggaatggg agataccata
3060
gctttgggga aagggtaacg aaaaggggga gccgagaacc cagggaagga aaaaagattt
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3174

<210> 5850
<211> 154
<212> PRT
<213> Homo sapiens

<400> 5850
Gly Ala Gly Lys Val Ala Ala Val Leu Asp Ala His Leu Ser Arg Gln
1   5   10   15
His Ser Val Pro Ala Tyr Pro Trp Asp Trp Gly His Leu Ile Arg Phe
                20   25   30
Cys Thr Gln Thr Gly His Ala Gln Pro Cys Pro Ser Ala Pro Ser Thr
            35   40   45
Gly Pro Ile His Ile Ala Glu Gly Gly Arg Gly Arg Pro Pro Pro Gly
        50   55   60
Ser Ala Ser Asn Pro Gln Pro Pro Gly Ser Pro His Cys Pro Ser Ala
65   70   75   80
Gly Leu Ser Pro Val Pro Gly Val Gly Gly Arg Gln Cys Pro Gly Thr
                85   90   95
Val Pro Arg Val Arg Arg Pro Gly Leu Ala Gly His Pro Val Thr His
            100   105   110
Arg Ile Asn Arg Lys Thr Ala Ser Pro Pro Asn Leu Cys Pro Arg His
        115   120   125
Asn Met Ser Arg Ser Glu Ser Cys Thr Pro Arg Ser Arg Ala Pro Leu
    130   135   140
Gln Arg Thr Leu Thr Pro Pro Arg Gly Ala
145   150

<210> 5851
<211> 488

<212> DNA
<213> Homo sapiens

<400> 5851
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attaaatgtg tttaagcatc tggcatatct cctcaattgc accaaaagaa tttggaagca
120
cttggtttgg tctcaaaggc aaaaggaaag gacgaggaag gggccaggcc tcccgccagg
180
cccccgcccc cctcacattt ctgagtccgc atacatcccg ttgattaagt agtccacctg
240
ggtgtagtcc ttcttcttgt agctctcata ggcatctgtc ctgcttgtgt cctctgttgt
300
gacttccata gagttgaggt gggctgccga agtccctttg gtcaatgtga caggagaagc
360
tgctgccatg gttacatcct cagacgtttt attatcaact gtttccacag atgcattcct
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480
tgacgcgt
488

<210> 5852
<211> 82
<212> PRT
<213> Homo sapiens

<400> 5852
Met Trp Lys Gly Leu Val Lys Arg Asn Ala Ser Val Glu Thr Val Asp
1   5   10   15
Asn Lys Thr Ser Glu Asp Val Thr Met Ala Ala Ala Ser Pro Val Thr
            20   25   30
Leu Thr Lys Gly Thr Ser Ala Ala His Leu Asn Ser Met Glu Val Thr
        35   40   45
Thr Glu Asp Thr Ser Arg Thr Asp Ala Tyr Glu Ser Tyr Lys Lys Lys
    50   55   60
Asp Tyr Thr Gln Val Asp Tyr Leu Ile Asn Gly Met Tyr Ala Asp Ser
65   70   75   80
Glu Met

<210> 5853
<211> 487
<212> DNA
<213> Homo sapiens

<400> 5853
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agacggtctc aagagggagg cccagcccgt cccgcggccc ctgacacccc atcaggccgc
120
tcaggcccag cagctccatg gaggacgccg gcgaggaccc caccacgttt gctgcccact
180

ctctgcccag tgacccccgt ctcttggcca ctgtgaccaa cgcatacctg ggcacacgag
240

tgtttcacga cacgctgcac gtgagcggcg tgtacaatgg ggctggcggg gacacgcacc
300

gggccatgct gcccagcccc ctcaacgtcc ggctggaggc ccccgcaggg atgggggagc
360

agctgaccga gaccttcgcc ctggacacca acacaggctc ctttcttcac accctggagg
420

gcccccgctt ccgggcctcc cagtgcatct atgcgcatcg cacgctgccc cacgtgctgg
480

ctttccg
487

<210> 5854
<211> 68
<212> PRT
<213> Homo sapiens

<400> 5854
Arg Glu Trp Lys Val Gln Arg Pro Glu Leu Arg Glu Ala Ser Gly Asp
 1   5   10   15
Tyr Arg Arg Ser Gln Glu Gly Gly Pro Ala Arg Pro Ala Ala Pro Asp
            20   25   30
Thr Pro Ser Gly Arg Ser Gly Pro Ala Ala Pro Trp Arg Thr Pro Ala
        35   40   45
Arg Thr Pro Pro Arg Leu Leu Pro Thr Leu Cys Pro Val Thr Pro Val
    50   55   60
Ser Trp Pro Leu
65

<210> 5855
<211> 362
<212> DNA
<213> Homo sapiens

<400> 5855
gcgcgccagg ggcaggggag ggatggagcc agcgagggtc gggatagcga gcgagggtgg
60

gagggactcc gtaacagccc ctctgtgctc agcggatccc cttctagcag tccctccctc
120

tcctcccgac cctcccgcag gcacctgctg ggggctgtgg ggcccaaagc gggagggagt
180

taacgaggtt gttgcagaag tcctcctggc ggcacacgaa ggtgtaggag atcagggaga
240

ggccgggggcc catccggtgc tcagtgacgc ggggctcctg gtccttggcc tccgtgcagc
300

ccttggagag caccaggctc acttggggtc cgctctcaat gagcatcaac gtgtcctggc
360

an
362

<210> 5856
<211> 113
<212> PRT

<213> Homo sapiens

<400> 5856
Met Glu Pro Ala Arg Val Gly Ile Ala Ser Glu Gly Gly Arg Asp Ser
1   5   10   15
Val Thr Ala Pro Leu Cys Ser Ala Asp Pro Leu Leu Ala Val Pro Pro
            20   25   30
Ser Pro Pro Asp Pro Pro Ala Gly Thr Cys Trp Gly Leu Trp Gly Pro
        35   40   45
Lys Arg Glu Gly Val Asn Glu Val Val Ala Glu Val Leu Leu Ala Ala
    50   55   60
His Glu Gly Val Gly Asp Gln Gly Glu Ala Gly Ala His Pro Val Leu
65   70   75   80
Ser Asp Ala Gly Leu Leu Val Leu Gly Leu Arg Ala Ala Leu Gly Glu
            85   90   95
His Gln Ala His Leu Gly Ser Ala Leu Asn Glu His Gln Arg Val Leu
            100   105   110
Ala

<210> 5857
<211> 1751
<212> DNA
<213> Homo sapiens

<400> 5857
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120
cgggggcgac cgtcccgggg ccggccgccg aagctgcagc gcaactctcg cggcggccag
180
ggccgaggtg gggagaagcc cccgcacctg gcagccctaa ttctggcccg gggaggcagc
240
aaaggcatcc ccctgaagaa cattaagcac ctggcggggg tcccgctcat tggctgggtc
300
ctgcgtgcgg ccctggattc aggggccttc cagagtgtat gggtttcgac agaccatgat
360
gaaattgaga atgtggccaa acaatttggt gcacaagttc atcgaagaag ttctgaagtt
420
tcaaaagaca gctctacctc actagatgcc atcatagaat ttcttaatta tcataatgag
480
gttgacattg taggaaatat tcaagctact tctccatgtt tacatcctac tgatcttcaa
540
aaagttgcag aaatgattcg agaagaagga tatgattctg ttttctctgt tgtgagacgc
600
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660
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720
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780
gcatactacg aaatgcgagc tgaacatagt gtggatatag atgtggatat tgattggcct
840

attgcagagc aaagagtatt aagatatggc tattttggca aagagaagct taaggaaata
900
aaacttttgg tttgcaatat tgatggatgt ctcaccaatg gccacattta tgtatcagga
960
gaccaaaaag aaataatatc ttatgatgta aaagatgcta ttgggataag tttattaaag
1020
aaaagtggta ttgaggtgag gctaatctca gaaagggcct gttcaaagca gacgctgtct
1080
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1140
gaatggagaa aagaaatggg cctgtgctgg aaagaagtgg catatcttgg aaatgaagtg
1200
tctgatgaag agtgcttgaa gagagtgggc ctaagtggcg ctcctgctga tgcctgttct
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1320
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1380
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1440
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1500
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ctttctcaga ttttttagtaa atgcaagtaa gaacatcatc aaagttcact ttgtattgta
1620
ccctgtaaaa ctgtgtgttt gtgtgctttc aaagatgttg ggattttatt tatctgggga
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1740
aaaaaaaaaa a
1751

<210> 5858
<211> 434
<212> PRT
<213> Homo sapiens

<400> 5858
Met Asp Ser Val Glu Lys Gly Ala Ala Thr Ser Val Ser Asn Pro Arg
1   5   10   15
Gly Arg Pro Ser Arg Gly Arg Pro Pro Lys Leu Gln Arg Asn Ser Arg
            20   25   30
Gly Gly Gln Gly Arg Gly Gly Glu Lys Pro Pro His Leu Ala Ala Leu
        35   40   45
Ile Leu Ala Arg Gly Gly Ser Lys Gly Ile Pro Leu Lys Asn Ile Lys
        50   55   60
His Leu Ala Gly Val Pro Leu Ile Gly Trp Val Leu Arg Ala Ala Leu
65   70   75   80
Asp Ser Gly Ala Phe Gln Ser Val Trp Val Ser Thr Asp His Asp Glu
                85   90   95
Ile Glu Asn Val Ala Lys Gln Phe Gly Ala Gln Val His Arg Arg Ser
                100   105   110
Ser Glu Val Ser Lys Asp Ser Ser Thr Ser Leu Asp Ala Ile Ile Glu

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                115                    120                    125
Phe Leu Asn Tyr His Asn Glu Val Asp Ile Val Gly Asn Ile Gln Ala
      130                    135                    140
Thr Ser Pro Cys Leu His Pro Thr Asp Leu Gln Lys Val Ala Glu Met
145                    150                    155                    160
Ile Arg Glu Glu Gly Tyr Asp Ser Val Phe Ser Val Val Arg Arg His
                165                    170                    175
Gln Phe Arg Trp Ser Glu Ile Gln Lys Gly Val Arg Glu Val Thr Glu
          180                    185                    190
Pro Leu Asn Leu Asn Pro Ala Lys Arg Pro Arg Arg Gln Asp Trp Asp
          195                    200                    205
Gly Glu Leu Tyr Glu Asn Gly Ser Phe Tyr Phe Ala Lys Arg His Leu
      210                    215                    220
Ile Glu Met Gly Tyr Leu Gln Gly Gly Lys Met Ala Tyr Tyr Glu Met
225                    230                    235                    240
Arg Ala Glu His Ser Val Asp Ile Asp Val Asp Ile Asp Trp Pro Ile
                245                    250                    255
Ala Glu Gln Arg Val Leu Arg Tyr Gly Tyr Phe Gly Lys Glu Lys Leu
          260                    265                    270
Lys Glu Ile Lys Leu Leu Val Cys Asn Ile Asp Gly Cys Leu Thr Asn
      275                    280                    285
Gly His Ile Tyr Val Ser Gly Asp Gln Lys Glu Ile Ile Ser Tyr Asp
      290                    295                    300
Val Lys Asp Ala Ile Gly Ile Ser Leu Leu Lys Lys Ser Gly Ile Glu
305                    310                    315                    320
Val Arg Leu Ile Ser Glu Arg Ala Cys Ser Lys Gln Thr Leu Ser Ser
                325                    330                    335
Leu Lys Leu Asp Cys Lys Met Glu Val Ser Val Ser Asp Lys Leu Ala
          340                    345                    350
Val Val Asp Glu Trp Arg Lys Glu Met Gly Leu Cys Trp Lys Glu Val
          355                    360                    365
Ala Tyr Leu Gly Asn Glu Val Ser Asp Glu Glu Cys Leu Lys Arg Val
      370                    375                    380
Gly Leu Ser Gly Ala Pro Ala Asp Ala Cys Ser Thr Ala Gln Lys Ala
385                    390                    395                    400
Val Gly Tyr Ile Cys Lys Cys Asn Gly Gly Arg Gly Ala Ile Arg Glu
                405                    410                    415
Phe Ala Glu His Ile Cys Leu Leu Met Glu Lys Val Asn Asn Ser Cys
          420                    425                    430
Gln Lys
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<210> 5859
<211> 2267
<212> DNA
<213> Homo sapiens

<400> 5859
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aaatatatat ataaaaaaaa taataagaca attacagcac taaaccaggc accttcgacc
120
aaatcacaac ctcctctttg attcccttc acgctaagcc tctttcaaat tctttttcct
180
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gagctggaag accagtcaga tgcccgcagg gtcagcgcca agcacattcc caaccgggca
240
actgtgtacc tttctctagg agtgcacgac acccttcccc cacaactcct tgttttaaag
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360
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420
gctggctgcc acgtttacat gaggccaccg aagatctaag tccagctaag cccagggagg
480
ctcctgcaaa ggctgggacc tcgggtgctg cgtcctcaac cctctcggtg accacggctc
540
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600
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720
ccctggacta ctgattgaac acagaacaag agatgcgcgt ggcgtcagac taagtcttag
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900
gcaacaacaa ctacatcatt tttggcattt taacatggag acagtgacaa gtggtaacaa
960
agcaaaagaa aaaaaaaact tgaagagacc aatatttaac tttcccatcc acccaagtct
1020
cacacttaag ttctagtccc atctcccccа taagcaccac tgaactaaat atctatttta
1080
aagcacccaa accagtccag accctctgga aaccaagagc cccagccaca gctgtcgcct
1140
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1560
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1620
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1680
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1740
tcgcagccag aaggctgtgg gcgtacaggc agccaagggg agaaacagaa ccgacaccgg
1800
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cctaggccca tctgcaagaa aaagcggaga aggagtgacc cggatgcttc cgaagcacgc
1860
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1920
ggacattttt tctgagtaaa tggcgattcc tcttccatgt ggcatctgct tggatcacga
1980
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2040
aaacttaaaa aaaaaaaaa aacctagatt gctcaaagtt tctgcctctt ttgtaggaat
2100
ggtaaatcaa ctatgagcaa gtattttaat tcaacattaa gggaaaaaaa aggactttgg
2160
aaagcataca gaaaaaaagg tagttaacgt tggatcatgt gtaaaacgga acctcaggga
2220
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2267

<210> 5860
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5860
Met Glu Glu Glu Ser Pro Phe Thr Gln Lys Lys Cys Pro Leu Gln Glu
1   5   10   15
Pro Ala Ala Ala Arg Gln Ser Pro Ala Arg Leu His Pro Lys Ser Arg
            20   25   30
Ser Arg Ala Ser Glu Ala Ser Gly Ser Leu Leu Leu Arg Phe Phe Leu
        35   40   45
Gln Met Gly Leu Gly Arg Cys Arg Phe Cys Phe Ser Pro Trp Leu Pro
    50   55   60
Val Arg Pro Gln Pro Ser Gly Cys Asp Ile Ile Glu Ser Ala Val Ser
65   70   75   80
Pro Leu Val Gly Asp Trp Gly Ser Val Phe Ser His Leu Tyr Leu Leu
                85   90   95

<210> 5861
<211> 1951
<212> DNA
<213> Homo sapiens

<400> 5861
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ggcaaagtgc tgatggagaa gctgtttcgc accagcccag acctgaaagt catttacatc
120
cttgtgaggc ccaaggctgg ccagacactg cagcagaggg ttttccagat cctagacagt
180
aagctatttg agaaagtcaa agaagtttgt ccaaatgtgc atgagaagat cagagctatt
240
tatgcagatc tcaatcagaa tgactttgcc atcagcaaag aggacatgca ggagcttctc
300
tcctgtacaa acataatatt tcactgtgca gccactgtac gctttgacga cactctcaga
360

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catgctgtgc aacttaacgt cactgccacc cggcagctct tgcttatggc tagtcagatg
420
ccaaagctgg aagcctttat acatatctct actgcctatt caaattgtaa cctgaagcac
480
atcgatgaag ttatctatcc gtgccctgtg gagccaaaaa aaaaaatcat tgattccctt
540
gagtggttag acgatgctat tattgacgag attacaccca agctgatcag agattggccc
600
aatatttata cctacaccaa ggccttggga gaaatggtgg tgcagcaaga gagcaggaac
660
ctgaacattg ccatcataag gccctccatt gtgggagcaa cttggcagga gcctttccca
720
ggttgggttg ataatataaa tggacctaat ggaatcatta ttgcgactgg gaaagggttt
780
cttcgggcca taaaagctac tccaatggct gtggcagacg taattccagt tgatacagtc
840
gtcaatctca tgctagctgt aggatggtat actgcagttc acagacctaa gtcaacatta
900
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960
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1020
tttaccagca acagcttcac atcacagtac tggaatgcgg tcagccaccg ggcccctgcc
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1200
agcacgtaca atacagaaat gctgatgtct gagctgagtc ctgaagacca gagagtattc
1260
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1320
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1560
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1620
gaaagtaaca aggaatatgc ccaaactgtc aaatgtcacc tgttatgtat tcgtccctat
1680
tccttaacta tgtattttta tttcagtgag agaaggaaag ttgtaaacta gcccatagtc
1740
acctatattt tagggaaaaa aatccaaatt gtttcctaac attctatttt atgcccttgc
1800
gtattaaacg tgaaagtact cccacttttc tatatttagt ttttcctttc tctctgagat
1860
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1920
cagtactaac cttggaacca ttctgggtac c
1951
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<210> 5862
<211> 514
<212> PRT
<213> Homo sapiens

<400> 5862
Xaa Ile Ala Ala Phe Tyr Gly Gly Lys Ser Ile Leu Ile Thr Gly Ala
1   5   10   15
Thr Gly Phe Leu Gly Lys Val Leu Met Glu Lys Leu Phe Arg Thr Ser
            20   25   30
Pro Asp Leu Lys Val Ile Tyr Ile Leu Val Arg Pro Lys Ala Gly Gln
        35   40   45
Thr Leu Gln Gln Arg Val Phe Gln Ile Leu Asp Ser Lys Leu Phe Glu
    50   55   60
Lys Val Lys Glu Val Cys Pro Asn Val His Glu Lys Ile Arg Ala Ile
65   70   75   80
Tyr Ala Asp Leu Asn Gln Asn Asp Phe Ala Ile Ser Lys Glu Asp Met
                85   90   95
Gln Glu Leu Leu Ser Cys Thr Asn Ile Ile Phe His Cys Ala Ala Thr
            100   105   110
Val Arg Phe Asp Asp Thr Leu Arg His Ala Val Gln Leu Asn Val Thr
        115   120   125
Ala Thr Arg Gln Leu Leu Leu Met Ala Ser Gln Met Pro Lys Leu Glu
    130   135   140
Ala Phe Ile His Ile Ser Thr Ala Tyr Ser Asn Cys Asn Leu Lys His
145   150   155   160
Ile Asp Glu Val Ile Tyr Pro Cys Pro Val Glu Pro Lys Lys Lys Ile
                165   170   175
Ile Asp Ser Leu Glu Trp Leu Asp Asp Ala Ile Ile Asp Glu Ile Thr
                180   185   190
Pro Lys Leu Ile Arg Asp Trp Pro Asn Ile Tyr Thr Tyr Thr Lys Ala
            195   200   205
Leu Gly Glu Met Val Val Gln Gln Glu Ser Arg Asn Leu Asn Ile Ala
    210   215   220
Ile Ile Arg Pro Ser Ile Val Gly Ala Thr Trp Gln Glu Pro Phe Pro
225   230   235   240
Gly Trp Val Asp Asn Ile Asn Gly Pro Asn Gly Ile Ile Ile Ala Thr
                245   250   255
Gly Lys Gly Phe Leu Arg Ala Ile Lys Ala Thr Pro Met Ala Val Ala
            260   265   270
Asp Val Ile Pro Val Asp Thr Val Val Asn Leu Met Leu Ala Val Gly
        275   280   285
Trp Tyr Thr Ala Val His Arg Pro Lys Ser Thr Leu Val Tyr His Ile
    290   295   300
Thr Ser Gly Asn Met Asn Pro Cys Asn Trp His Lys Met Gly Val Gln
305   310   315   320
Val Leu Ala Thr Phe Glu Lys Ile Pro Phe Glu Arg Pro Phe Arg Arg
            325   330   335
Pro Asn Ala Asn Phe Thr Ser Asn Ser Phe Thr Ser Gln Tyr Trp Asn
            340   345   350
Ala Val Ser His Arg Ala Pro Ala Ile Ile Tyr Asp Cys Tyr Leu Arg
        355   360   365
Leu Thr Gly Arg Lys Pro Arg Met Thr Lys Leu Met Asn Arg Leu Leu

```
        370                  375                  380
Arg Thr Val Ser Met Leu Glu Tyr Phe Ile Asn Arg Ser Trp Glu Trp
385                  390                  395                  400
Ser Thr Tyr Asn Thr Glu Met Leu Met Ser Glu Leu Ser Pro Glu Asp
                405                  410                  415
Gln Arg Val Phe Asn Phe Asp Val Arg Gln Leu Asn Trp Leu Glu Tyr
                420                  425                  430
Ile Glu Asn Tyr Val Leu Gly Val Lys Lys Tyr Leu Leu Lys Glu Asp
            435                  440                  445
Met Ala Gly Ile Pro Lys Ala Lys Gln Arg Leu Lys Arg Leu Arg Asn
        450                  455                  460
Ile His Tyr Leu Phe Asn Thr Ala Leu Phe Leu Ile Ala Trp Arg Leu
465                  470                  475                  480
Leu Ile Ala Arg Ser Gln Met Ala Arg Asn Val Trp Phe Phe Ile Val
                485                  490                  495
Ser Phe Cys Tyr Lys Phe Leu Ser Tyr Phe Arg Ala Ser Ser Thr Leu
                500                  505                  510
Lys Val
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<210> 5863
<211> 438
<212> DNA
<213> Homo sapiens

<400> 5863
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120
agaagtgcca gtcttaacat tcactgtttg tgactgattt atagaaaaag gggctggatt
180
ctggtagccg ggggagccca gggtgaacac tgaggttcta ccctgttcta gtggttgctt
240
tgattgatac tcagccatga aagggacata gctcagatac tgacaaaaca gctttgtatt
300
tgagtgtgtt tgtccaactg gcaaggaaca gtctggggac aaacagtgcc ttatttggag
360
ttgcttattc ttctccccca tggagtgacc tcagataacc tttcccagct tggaaagacc
420
tgaatcagat tttgtaca
438

<210> 5864
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5864
Met Gly Glu Lys Asn Lys Gln Leu Gln Ile Arg His Cys Leu Ser Pro
1               5                   10                  15
Asp Cys Ser Leu Pro Val Gly Gln Thr His Ser Asn Thr Lys Leu Phe
            20                  25                  30
Cys Gln Tyr Leu Ser Tyr Val Pro Phe Met Ala Glu Tyr Gln Ser Lys
```

```
            35                      40                      45
Gln Pro Leu Glu Gln Gly Arg Thr Ser Val Phe Thr Leu Gly Ser Pro
    50                      55                      60
Gly Tyr Gln Asn Pro Ala Pro Phe Ser Ile Asn Gln Ser Gln Thr Val
65                      70                      75                      80
Asn Val Lys Thr Gly Thr Ser Cys Leu Glu Thr Gln Ile Leu Phe Gln
                85                      90                      95
Glu Glu Tyr Leu Arg Ile Phe Leu
                100
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<210> 5865
<211> 1229
<212> DNA
<213> Homo sapiens

<400> 5865
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tttgatcttc ccccaacccc tgaggcctac atccatcgag ctggcaggac agcacgcgct 120
aacaacccag gcatagtctt aacctttgtg cttcccacgg agcagttcca cttaggcaag 180
attgaggagc ttctcgtgga gagaacaggg gccccattct gctcccctac cagttccgga 240
tggaggagat cgagggcttc cgctatcgct gcaggtgtcc accccagga tgccatgcgc 300
tcagtgacta agcaggccat tcgggaggca agattgaagg agatcaagga agagcttctg 360
cattctgaga agcttaagac atactttgaa gacaacccta gggacctcca gctgctgcgg 420
catgacctac ctttgcaccc cgcagtggtg aagccccacc tgggccatgt tcctgactac 480
ctggttcctc ctgctctccg tggcctggta cgccctcaca agaagcggaa gaagctgtct 540
tcctcttgta ggaaggccaa gagagcaaag tcccagaacc cactgcgcag cttcaagcac 600
aaaggaaaga aattcagacc cacagccaag ccctcctgag gttgttgggc ctctctggag 660
ctgagcacat tgtggagcac aggcttacac ccttcgtgga caggcgaggc tctggtgctt 720
actgcacagc ctgaacagac agttctgggg ccggcagtgc tgggcccttt agctccttgg 780
cacttccaag ctggcatctt gcccccttgac aacagaataa aaattttagc tgccccagtt 840
tgtgcctcca gcatatgaaa aggactattt gaatccccaa aacatcagga gtcgggaaac 900
ttcggaagac agctgtgcct ggctctgtgg ctgcatgcag tgcttcactt ggccagcaga 960
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ctgggagatg ggccttcctg accgccagcc ttcctctccc cgagcacacg cacatgtaga 1140
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1200
ttctgaacaa ctgttgatgt gtgaaaaaa
1229


<210> 5866
<211> 212
<212> PRT
<213> Homo sapiens

<400> 5866
Xaa Pro Glu Thr Gly Val Ala Arg Gly Ile Asp Phe His His Val Ser
 1               5                   10                  15
Ala Val Leu Asn Phe Asp Leu Pro Pro Thr Pro Glu Ala Tyr Ile His
            20                  25                  30
Arg Ala Gly Arg Thr Ala Arg Ala Asn Asn Pro Gly Ile Val Leu Thr
        35                  40                  45
Phe Val Leu Pro Thr Glu Gln Phe His Leu Gly Lys Ile Glu Glu Leu
    50                  55                  60
Leu Val Glu Arg Thr Gly Ala Pro Phe Cys Ser Pro Thr Ser Ser Gly
65                  70                  75                  80
Trp Arg Arg Ser Arg Ala Ser Ala Ile Ala Ala Gly Val His Pro Gln
                85                  90                  95
Asp Ala Met Arg Ser Val Thr Lys Gln Ala Ile Arg Glu Ala Arg Leu
            100                 105                 110
Lys Glu Ile Lys Glu Glu Leu Leu His Ser Glu Lys Leu Lys Thr Tyr
        115                 120                 125
Phe Glu Asp Asn Pro Arg Asp Leu Gln Leu Leu Arg His Asp Leu Pro
    130                 135                 140
Leu His Pro Ala Val Val Lys Pro His Leu Gly His Val Pro Asp Tyr
145                 150                 155                 160
Leu Val Pro Pro Ala Leu Arg Gly Leu Val Arg Pro His Lys Lys Arg
                165                 170                 175
Lys Lys Leu Ser Ser Ser Cys Arg Lys Ala Lys Arg Ala Lys Ser Gln
            180                 185                 190
Asn Pro Leu Arg Ser Phe Lys His Lys Gly Lys Lys Phe Arg Pro Thr
            195                 200                 205
Ala Lys Pro Ser
        210


<210> 5867
<211> 1882
<212> DNA
<213> Homo sapiens

<400> 5867
tcctatcgtg gtaccagaga tcttcctgcc atctgaggat gagtgtgggg acgtcctcgt
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catgagaaag aactcatccc catcctccat taccacttat gagacctgcc agacctacga
120
gcgtcccatt gccttcactg cccgttccag gaagctctgg atcaacttca agacaagcga
180
ggccaacagc gcccgtggct tccagattcc ctatgttacc tatgatgagg actatgagca
240

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gctggtagaa gacattgtgc gagatggccg gctctatgcc tctgaaaacc accaggagat
300
tttaaaggac aagaagctca tcaaggcctt ctttgaggtg ctagcccacc cccagaacta
360
cttcaagtac acagagaaac acaaggagat gctgccaaaa tccttcatca agctgctccg
420
ctccaaagtt tccagcttcc tgaggcccta caaatagtaa ccctaggctc agagacccaa
480
tttttttaagc ccccagactc cttagccctc agagccggca gcccctacc ctcagacaag
540
gaactctctc ctctctttt ggagggaaaa aaaaatatca ctacacaaac caggcactct
600
ccctttctgt ctttctagtt tccttttcctt gtctctctct gcctgcctct ctactgttcc
660
cccttttcta acacactacc tagaaaagcc attcagtact ggctctagtc cccgtgagat
720
gtaaagaaac agtacagccc cttccactgc ccattttacc agctcacatt cccgaccca
780
tcagcttgga agggtgctag aggcccatca aggaagtggg tctggtggga aacggggagg
840
ggaaagaagg gcttctgcca ttatagggtt gtgccttgct agtcaggggc caaaatgtcc
900
cctggctctg ctccctaggg tgattctaac agcccagggt cctgccaaag aagcctttga
960
tttacaggct taatgccagc accagtcctc tggggcacat ggtttgagct ctggacttcc
1020
cacatggcca gctttcttgt ctatacagat cctctcttc tttccctacg tctgcctggg
1080
gtctactcca taagggttta caaatggccc acaacactga gttagtggac accggctaaa
1140
tgaggaagag cagcaggcat tgtcatggtg aatgccccgc tgtagctccc tgagagaaag
1200
actgtaactc tgcaggacag aaacaaggtt ttaaagcatt gccaaaaaaa agaaaacaga
1260
aagaaaaaat gtatcatcta aaggtctaga cacagaacaa ttggaagtca acttcaaaca
1320
ctaatccctt ttcttgtctt ccctggccca gccacctcct cagccccatg tgatgctccc
1380
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1440
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1500
caccaaagag gacccactc tgaagccagc ctggagccac ctacctctgg cctcaggctg
1560
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1620
aataagtgca atcattttga gtctttctat gttgtctaga cggaggggtt tttgtttct
1680
gggtttgttt tttgttttg tttcttcttc ctctattagc aaaaccctat ttatagctgc
1740
ccaagagaaa agagtgtatg tttggagtgg aagaaaatcg gttttgaatc tcatgaacct
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tgagtgctgg agcatctgat ctgtctctat gccaccaccg gccacctaga gcccttggct
1860
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1882

<210> 5868
<211> 131
<212> PRT
<213> Homo sapiens

<400> 5868

Met	Arg	Lys	Asn	Ser	Ser	Pro	Ser	Ser	Ile	Thr	Thr	Tyr	Glu	Thr	Cys
1				5					10					15	

Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ala Arg Ser Arg Lys Leu
        20   25   30

Trp Ile Asn Phe Lys Thr Ser Glu Ala Asn Ser Ala Arg Gly Phe Gln
        35   40   45

Ile Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Glu Gln Leu Val Glu Asp
    50   55   60

Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu Ile
65   70   75   80

Leu Lys Asp Lys Lys Leu Ile Lys Ala Phe Phe Glu Val Leu Ala His
            85   90   95

Pro Gln Asn Tyr Phe Lys Tyr Thr Glu Lys His Lys Glu Met Leu Pro
            100   105   110

Lys Ser Phe Ile Lys Leu Leu Arg Ser Lys Val Ser Ser Phe Leu Arg
        115   120   125

Pro Tyr Lys
        130

<210> 5869
<211> 910
<212> DNA
<213> Homo sapiens

<400> 5869
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120
aagaaactca ccctgacgaa gctcgcccat tagtgactgc aatttctgtt tttagagttt
180
tggtattccg tgatattcaa atactaaaat acatgagttt ttattggtgt aattccatca
240
ttatttcatt atttcaacat ttaaaaaatt gcaagtctat gactcaatga ttccacagaa
300
aagacaaacg gatgggttgg cttcaagtct agactcgcct tcagagtctg tcttctccag
360
agaatcatcg cagatcacaa caggcagcct tctaattatg catcacgaag cttctaccca
420
cagggtaatt cccactctgg ttcaaacagg tttgcatggt cgtcacatcc tggggagaca
480
cgtatttggg tctgcggcaa acctttttag ttgtgccata gaccaggttt ttccgaacga
540
aggctgtctt ccatattcct gccaagaacc aaactcatca ctccagtacc aaatccagtc
600

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agtggtgagg atgaagtgtg gaggtttggt gacagaggag gccgtggaga ggcggcgagc
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ctgggtagca ccgtaagtca tggcgttaaa gttcagacaa tgagagtgaa aggtactggc
720
tgactcagag cacaggatcc tttctatttt gggattgcaa tatgcctctt caataagttc
780
catgttgtcc aaatcctccc atttgcctct atccaagaat tgccatcgat acggcaaatg
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900
gatctgatca
910
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<210> 5870
<211> 129
<212> PRT
<213> Homo sapiens

<400> 5870

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Met Ile Pro Gln Lys Arg Gln Thr Asp Gly Leu Ala Ser Ser Leu Asp
  1             5                  10                  15
Ser Pro Ser Glu Ser Val Phe Ser Arg Glu Ser Ser Gln Ile Thr Thr
              20                  25                  30
Gly Ser Leu Leu Ile Met His His Glu Ala Ser Thr His Arg Val Ile
          35                  40                  45
Pro Thr Leu Val Gln Thr Gly Leu His Gly Arg His Ile Leu Gly Arg
       50                  55                  60
His Val Phe Gly Ser Ala Ala Asn Leu Phe Ser Cys Ala Ile Asp Gln
65                  70                  75                  80
Val Phe Pro Asn Glu Gly Cys Leu Pro Tyr Ser Cys Gln Glu Pro Asn
                  85                  90                  95
Ser Ser Leu Gln Tyr Gln Ile Gln Ser Val Val Arg Met Lys Cys Gly
              100                 105                 110
Gly Leu Val Thr Glu Glu Ala Val Glu Arg Arg Arg Ala Trp Val Ala
          115                 120                 125
Pro
```

<210> 5871
<211> 2217
<212> DNA
<213> Homo sapiens

<400> 5871

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120
tagtcattca ggagcaagtt gttcagtttc catatagatt ctgtgtgttt tagtcttgct
180
taaattattt ctactacttc tttgcacccc tttgctagtt ttctcagtgc cgtagggttt
240
attaaataat aattggactc tagtaatttt ttttaatgag agagagggaa actatatttg
300
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aaattggatt gggacattta ttttacttaa acagaagttt gcttatgaca cataatctag
360
atgggatata tcttatctat agtgtatcca cctgctgtaa gtagatactg tatttgtata
420
gccattattt tgctgtaagt actttatcat tttaattaaa ttgattaaga ggaaaaaaaa
480
agaatggaat tctctttgat gcaacttttt cccccagac cagaatccgt agaagctagc
540
cctgtggtag ttgagaaatc caacagttat ccccaccagt tatataccag cagctcacat
600
cattcacaca gttacattgg tttgccctat gcggaccata attatggtgc tcgtcctcct
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720
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780
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840
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900
cagcatattc ctgatacata tctatgtgaa cgttgtcagc ctaggaattt ggataaagag
960
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1020
actgagagtg gtgatgaggt tcctgtggaa ttatatactg catttcagca tactccaaca
1080
tcaattactt taactgcttc aagagtttcc aaagttaatg ataaaagaag gaaaaaaagc
1140
ggggagaaag aacaacacat ttcaaaatgt aaaaaggcat ttcgtgaagg atctaggaag
1200
tcatcaagag ttaagggttc agctccagag attgatcctt catctgatgg ttcaaatttt
1260
ggatgggaga caaagatcaa agcatggatg gatcgatatg aagaagcaaa taacaaccag
1320
tacagtgagg gtgttcagag ggaggcacaa agaatagctc tgagattagg caatggaaat
1380
gacaaaaaag agatgaataa atccgatttg aataccaaca atttgctctt caaacctcct
1440
gtagagagcc atatacaaaa gaataagaaa attcttaaat ctgcaaaaga tttgcctcct
1500
gatgcactta tcattgaata cagagggaag tttatgctga gagaacagtt tgaagcaaat
1560
gggtatttct ttaaaagacc ataccctttt gtgttattct actctaaatt tcatgggcta
1620
gaaatgtgtg ttgatgcaag gacttttggg aatgaggctc gattcatcag gcggtcttgt
1680
acacccaatg cagaggtgag gcatgaaatt caagatggaa ccatacatct ttatatttat
1740
tctatacaca gtattccaaa gggaactgaa attactattg cctttgattt tgactatgga
1800
aattgtaagt acaaggtgga ctgtgcatgc ctcaaagaaa acccagagtg ccctgttcta
1860
aaacgtagtt ctgaatccat ggaaaatatc aatagtggtt atgagaccag acggaaaaaa
1920

ggaaaaaaag acaaagatat ttcaaaagaa aaagatacac aaaatcagaa tattactttg
1980
gattgtgaag gaacgaccaa caaaatgaag agcccagaaa ctaaacaaag aaagctttct
2040
ccactgagac tatcagtatc aaataatcag gaaccagatt ttattgatga tatagaagaa
2100
aaaactccta ttagtaatga agtagaaatg gaatcagagg agcagattgc agaaaggaaa
2160
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2217

<210> 5872
<211> 578
<212> PRT
<213> Homo sapiens

<400> 5872
Met Glu Phe Ser Leu Met Gln Leu Phe Pro Pro Arg Pro Glu Ser Val
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Glu Ala Ser Pro Val Val Val Glu Lys Ser Asn Ser Tyr Pro His Gln
                20   25   30
Leu Tyr Thr Ser Ser Ser His His Ser His Ser Tyr Ile Gly Leu Pro
            35   40   45
Tyr Ala Asp His Asn Tyr Gly Ala Arg Pro Pro Pro Thr Pro Pro Ala
        50   55   60
Ser Pro Pro Pro Ser Val Leu Ile Ser Lys Asn Glu Val Gly Ile Phe
65   70   75   80
Thr Thr Pro Asn Phe Asp Glu Thr Ser Ser Ala Thr Thr Ile Ser Thr
                85   90   95
Ser Glu Asp Gly Ser Tyr Gly Thr Asp Val Thr Arg Cys Ile Cys Gly
            100   105   110
Phe Thr His Asp Asp Gly Tyr Met Ile Cys Cys Asp Lys Cys Ser Val
        115   120   125
Trp Gln His Ile Asp Cys Met Gly Ile Asp Arg Gln His Ile Pro Asp
    130   135   140
Thr Tyr Leu Cys Glu Arg Cys Gln Pro Arg Asn Leu Asp Lys Glu Arg
145   150   155   160
Ala Val Leu Leu Gln Arg Arg Lys Arg Glu Asn Met Ser Asp Gly Asp
                165   170   175
Thr Ser Ala Thr Glu Ser Gly Asp Glu Val Pro Val Glu Leu Tyr Thr
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Ala Phe Gln His Thr Pro Thr Ser Ile Thr Leu Thr Ala Ser Arg Val
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Ser Lys Val Asn Asp Lys Arg Arg Lys Lys Ser Gly Glu Lys Glu Gln
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His Ile Ser Lys Cys Lys Lys Ala Phe Arg Glu Gly Ser Arg Lys Ser
225   230   235   240
Ser Arg Val Lys Gly Ser Ala Pro Glu Ile Asp Pro Ser Ser Asp Gly
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Ser Asn Phe Gly Trp Glu Thr Lys Ile Lys Ala Trp Met Asp Arg Tyr
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Glu Glu Ala Asn Asn Asn Gln Tyr Ser Glu Gly Val Gln Arg Glu Ala
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Gln Arg Ile Ala Leu Arg Leu Gly Asn Gly Asn Asp Lys Lys Glu Met

5039

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Leu Pro Pro Asp Ala Leu Ile Ile Glu Tyr Arg Gly Lys Phe Met Leu
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Arg Glu Gln Phe Glu Ala Asn Gly Tyr Phe Phe Lys Arg Pro Tyr Pro
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Phe Val Leu Phe Tyr Ser Lys Phe His Gly Leu Glu Met Cys Val Asp
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Ala Arg Thr Phe Gly Asn Glu Ala Arg Phe Ile Arg Arg Ser Cys Thr
385                    390                    395                    400
Pro Asn Ala Glu Val Arg His Glu Ile Gln Asp Gly Thr Ile His Leu
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Tyr Ile Tyr Ser Ile His Ser Ile Pro Lys Gly Thr Glu Ile Thr Ile
                   420                    425                    430
Ala Phe Asp Phe Asp Tyr Gly Asn Cys Lys Tyr Lys Val Asp Cys Ala
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Cys Leu Lys Glu Asn Pro Glu Cys Pro Val Leu Lys Arg Ser Ser Glu
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Ser Met Glu Asn Ile Asn Ser Gly Tyr Glu Thr Arg Arg Lys Lys Gly
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Lys Lys Asp Lys Asp Ile Ser Lys Glu Lys Asp Thr Gln Asn Gln Asn
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Ile Thr Leu Asp Cys Glu Gly Thr Thr Asn Lys Met Lys Ser Pro Glu
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Thr Lys Gln Arg Lys Leu Ser Pro Leu Arg Leu Ser Val Ser Asn Asn
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Gln Glu Pro Asp Phe Ile Asp Asp Ile Glu Glu Lys Thr Pro Ile Ser
       530                    535                    540
Asn Glu Val Glu Met Glu Ser Glu Glu Gln Ile Ala Glu Arg Lys Arg
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Lys Met Thr Arg Glu Glu Arg Lys Met Glu Ala Ile Leu Gln Ala Phe
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<211> 3463
<212> DNA
<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

<400> 5874
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            35                  40                  45
Ser Asp Glu Glu Glu Asp Asp Asp Asp Gly Gly Ser Ser Lys Tyr Asp
    50                  55                  60
Ile Leu Ala Ser Glu Asp Val Glu Gly Gln Glu Ala Ala Thr Leu Pro
65                  70                  75                  80
Ser Glu Gly Gly Val Arg Ile Thr Pro Phe Asn Leu Gln Glu Glu Met
                85                  90                  95
Glu Glu Gly His Phe Asp Ala Asp Gly Asn Tyr Phe Leu Asn Arg Asp
               100                 105                 110
Ala Gln Ile Arg Asp Ser Trp Leu Asp Asn Ile Asp Trp Val Lys Ile
               115                 120                 125
Arg Glu Arg Pro Pro Gly Gln Arg Gln Ala Ser Asp Ser Glu Glu Glu
    130                 135                 140
Asp Ser Leu Gly Gln Thr Ser Met Ser Ala Gln Ala Leu Leu Glu Gly
145                 150                 155                 160
Leu Leu Glu Leu Leu Leu Pro Arg Glu Thr Val Ala Gly Ala Leu Arg
               165                 170                 175
Arg Leu Gly Ala Arg Gly Gly Gly Lys Gly Arg Lys Gly Pro Gly Gln
               180                 185                 190
Pro Ser Ser Pro Gln Arg Leu Asp Arg Leu Ser Gly Leu Ala Asp Gln
    195                 200                 205
Met Val Ala Arg Gly Asn Leu Gly Val Tyr Gln Glu Thr Arg Glu Arg
    210                 215                 220
Leu Ala Met Arg Leu Lys Gly Leu Gly Cys Gln Thr Leu Gly Pro His
225                 230                 235                 240
Asn Pro Thr Pro Pro Pro Ser Leu Asp Met Phe Ala Glu Glu Leu Ala
               245                 250                 255
Glu Glu Glu Leu Glu Thr Pro Thr Pro Thr Gln Arg Gly Glu Ala Glu
               260                 265                 270
Ser Arg Gly Asp Gly Leu Val Asp Val Met Trp Glu Tyr Lys Trp Glu
    275                 280                 285
Asn Thr Gly Asp Ala Glu Leu Tyr Gly Pro Phe Thr Ser Ala Gln Met
    290                 295                 300
Gln Thr Trp Val Ser Glu Gly Tyr Phe Pro Asp Gly Val Tyr Cys Arg
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<400> 5875

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5044

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<211> 1648
<212> PRT
<213> Homo sapiens

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Glu Val Ser Ala Asp Gly Val Asn Met Leu Pro Leu Ser Thr Pro Val
        35                  40                  45
Val Thr Ser Gly Leu Thr Tyr Ile Lys Ile Gln Leu Val Lys Ala Glu
    50                  55                  60
Val Ala Ser Ala Val Cys Leu Arg Leu His Arg Pro Arg Asp Ala Ser
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Thr Thr Ser Ser Ala Thr Val Asn Asn Pro Phe Leu Pro Ser Glu Asp
                    100                       105                       110
Gln Val Ser Lys Thr Ser Ile Gly Trp Leu Arg Leu Leu His His Cys
        115                       120                       125
Leu Thr His Ile Ser Asp Leu Glu Gly Met Met Ala Ser Ala Ala Ala
        130                       135                       140
Pro Thr Ala Asn Leu Leu Gln Thr Cys Ala Ala Leu Leu Met Ser Pro
145                       150                       155                       160
Tyr Cys Gly Met His Ser Pro Asn Ile Glu Val Val Leu Val Lys Ile
                    165                       170                       175
Gly Leu Gln Ser Thr Arg Ile Gly Leu Lys Leu Ile Asp Ile Leu Leu
                    180                       185                       190
Arg Asn Cys Ala Ala Ser Gly Ser Asp Pro Thr Asp Leu Asn Ser Pro
            195                       200                       205
Leu Leu Phe Gly Arg Leu Asn Gly Leu Ser Ser Asp Ser Thr Ile Asp
        210                       215                       220
Ile Leu Tyr Gln Leu Gly Thr Thr Gln Asp Pro Gly Thr Lys Asp Arg
225                       230                       235                       240
Ile Gln Ala Leu Leu Lys Trp Val Ser Asp Ser Ala Arg Val Ala Ala
                    245                       250                       255
Met Lys Arg Ser Gly Arg Met Asn Tyr Met Cys Pro Asn Ser Ser Thr
                    260                       265                       270
Val Glu Tyr Gly Leu Leu Met Pro Ser Pro Ser His Leu His Cys Val
            275                       280                       285
Ala Ala Ile Leu Trp His Ser Tyr Glu Leu Leu Val Glu Tyr Asp Leu
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Pro Ala Leu Leu Asp Gln Glu Leu Phe Glu Leu Leu Phe Asn Trp Ser
305                       310                       315                       320
Met Ser Leu Pro Cys Asn Met Val Leu Lys Lys Ala Val Asp Ser Leu
                    325                       330                       335
Leu Cys Ser Met Cys His Val His Pro Asn Tyr Phe Ser Leu Leu Met
                    340                       345                       350
Gly Trp Met Gly Ile Thr Pro Pro Val Gln Cys His His Arg Leu
            355                       360                       365
Ser Met Thr Asp Asp Ser Lys Lys Gln Asp Leu Ser Ser Ser Leu Thr
        370                       375                       380
Asp Asp Ser Lys Asn Ala Gln Ala Pro Leu Ala Leu Thr Glu Ser His
385                       390                       395                       400
Leu Ala Thr Leu Ala Ser Ser Ser Gln Ser Pro Glu Ala Ile Lys Gln
                    405                       410                       415
Leu Leu Asp Ser Gly Leu Pro Ser Leu Leu Val Arg Ser Leu Ala Ser
                    420                       425                       430
Phe Cys Phe Ser His Ile Ser Ser Ser Glu Ser Ile Ala Gln Ser Ile
            435                       440                       445
Asp Ile Ser Gln Asp Lys Leu Arg Arg His His Val Pro Gln Gln Cys
    450                       455                       460
Asn Lys Met Pro Ile Thr Ala Asp Leu Val Ala Pro Ile Leu Arg Phe
465                       470                       475                       480
Leu Thr Glu Val Gly Asn Ser His Ile Met Lys Asp Trp Leu Gly Gly
                    485                       490                       495
Ser Glu Val Asn Pro Leu Trp Thr Ala Leu Leu Phe Leu Leu Cys His
```

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                        500                     505                     510
Ser Gly Ser Thr Ser Gly Ser His Asn Leu Gly Ala Gln Gln Thr Ser
            515                     520                     525
Ala Arg Ser Ala Ser Leu Ser Ser Ala Ala Thr Thr Gly Leu Thr Thr
        530                     535                     540
Gln Gln Arg Thr Ala Ile Glu Asn Ala Thr Val Ala Phe Phe Leu Gln
545                     550                     555                     560
Cys Ile Ser Cys His Pro Asn Asn Gln Lys Leu Met Ala Gln Val Leu
                565                     570                     575
Cys Glu Leu Phe Gln Thr Ser Pro Gln Arg Gly Asn Leu Pro Thr Ser
            580                     585                     590
Gly Asn Ile Ser Gly Phe Ile Arg Arg Leu Phe Leu Gln Leu Met Leu
            595                     600                     605
Glu Asp Glu Lys Val Thr Met Phe Leu Gln Ser Pro Cys Pro Leu Tyr
    610                     615                     620
Lys Gly Arg Ile Asn Ala Thr Ser His Val Ile Gln His Pro Met Tyr
625                     630                     635                     640
Gly Ala Gly His Lys Phe Arg Thr Leu His Leu Pro Val Ser Thr Thr
                645                     650                     655
Leu Ser Asp Val Leu Asp Arg Val Ser Asp Thr Pro Ser Ile Thr Ala
                660                     665                     670
Lys Leu Ile Ser Glu Gln Lys Asp Asp Lys Glu Lys Lys Asn His Glu
        675                     680                     685
Glu Lys Glu Lys Val Lys Ala Glu Asn Gly Phe Gln Asp Asn Tyr Ser
    690                     695                     700
Val Val Val Ala Ser Gly Leu Lys Ser Gln Ser Lys Arg Ala Val Ser
705                     710                     715                     720
Ala Thr Pro Pro Arg Pro Pro Ser Arg Arg Gly Arg Thr Ile Pro Asp
                725                     730                     735
Lys Ile Gly Ser Thr Ser Gly Ala Glu Ala Ala Asn Lys Ile Ile Thr
            740                     745                     750
Val Pro Val Phe His Leu Phe His Lys Leu Leu Ala Gly Gln Pro Leu
        755                     760                     765
Pro Ala Glu Met Thr Leu Ala Gln Leu Leu Thr Leu Leu Tyr Asp Arg
    770                     775                     780
Lys Leu Pro Gln Gly Tyr Arg Ser Ile Asp Leu Thr Val Lys Leu Gly
785                     790                     795                     800
Ser Arg Val Ile Thr Asp Pro Ser Leu Ser Lys Thr Asp Ser Tyr Lys
                805                     810                     815
Arg Leu His Pro Glu Lys Asp His Gly Asp Leu Leu Ala Ser Cys Pro
            820                     825                     830
Glu Asp Glu Ala Leu Thr Pro Gly Asp Glu Cys Met Asp Gly Ile Leu
        835                     840                     845
Asp Glu Ser Leu Leu Glu Thr Cys Pro Ile Gln Ser Pro Leu Gln Val
    850                     855                     860
Phe Ala Gly Met Gly Gly Leu Ala Leu Ile Ala Glu Arg Leu Pro Met
865                     870                     875                     880
Leu Tyr Pro Glu Val Ile Gln Gln Val Ser Ala Pro Val Val Thr Ser
                885                     890                     895
Thr Thr Gln Glu Lys Pro Lys Asp Ser Asp Gln Phe Glu Trp Val Thr
            900                     905                     910
Ile Glu Gln Ser Gly Glu Leu Val Tyr Glu Ala Pro Glu Thr Val Ala
        915                     920                     925
Ala Glu Pro Pro Pro Ile Lys Ser Ala Val Gln Thr Met Ser Pro Ile
```

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          930                    935                    940
Pro Ala His Ser Leu Ala Ala Phe Gly Leu Phe Leu Arg Leu Pro Gly
945                    950                    955                    960
Tyr Ala Glu Val Leu Leu Lys Glu Arg Lys His Ala Gln Cys Leu Leu
                   965                    970                    975
Arg Leu Val Leu Gly Val Thr Asp Asp Gly Glu Gly Ser His Ile Leu
                   980                    985                    990
Gln Ser Pro Ser Ala Asn Val Leu Pro Thr Leu Pro Phe His Val Leu
          995                    1000                   1005
Arg Ser Leu Phe Ser Thr Thr Pro Leu Thr Thr Asp Asp Gly Val Leu
          1010                   1015                   1020
Leu Arg Arg Met Ala Leu Glu Ile Gly Ala Leu His Leu Ile Leu Val
1025                   1030                   1035                   1040
Cys Leu Ser Ala Leu Ser His His Ser Pro Arg Val Pro Asn Ser Ser
                   1045                   1050                   1055
Val Asn Gln Thr Glu Pro Gln Val Ser Ser Ser His Asn Pro Thr Ser
              1060                   1065                   1070
Thr Glu Glu Gln Gln Leu Tyr Trp Ala Lys Gly Thr Gly Phe Gly Thr
          1075                   1080                   1085
Gly Ser Thr Ala Ser Gly Trp Asp Val Glu Gln Ala Leu Thr Lys Gln
          1090                   1095                   1100
Arg Leu Glu Glu Glu His Val Thr Cys Leu Leu Gln Val Leu Ala Ser
1105                   1110                   1115                   1120
Tyr Ile Asn Pro Val Ser Ser Ala Val Asn Gly Glu Ala Gln Ser Ser
                   1125                   1130                   1135
His Glu Thr Arg Gly Gln Asn Ser Asn Ala Leu Pro Ser Val Leu Leu
              1140                   1145                   1150
Glu Leu Leu Ser Gln Ser Cys Leu Ile Pro Ala Met Ser Ser Tyr Leu
          1155                   1160                   1165
Arg Asn Asp Ser Val Leu Asp Met Ala Arg His Val Pro Leu Tyr Arg
          1170                   1175                   1180
Ala Leu Leu Glu Leu Leu Arg Ala Ile Ala Ser Cys Ala Ala Met Val
1185                   1190                   1195                   1200
Pro Leu Leu Leu Pro Leu Ser Thr Glu Asn Gly Glu Glu Glu Glu Glu
                   1205                   1210                   1215
Gln Ser Glu Cys Gln Thr Ser Val Gly Thr Leu Leu Ala Lys Met Lys
              1220                   1225                   1230
Thr Cys Val Asp Thr Tyr Thr Asn Arg Leu Arg Ser Lys Arg Glu Asn
              1235                   1240                   1245
Val Lys Thr Gly Val Lys Pro Asp Ala Ser Asp Gln Glu Pro Glu Gly
          1250                   1255                   1260
Leu Thr Leu Leu Val Pro Asp Ile Gln Lys Thr Ala Glu Ile Val Tyr
1265                   1270                   1275                   1280
Ala Ala Thr Thr Ser Leu Arg Arg Ala Asn Gln Glu Lys Lys Leu Gly
                   1285                   1290                   1295
Glu Tyr Ser Lys Lys Ala Ala Met Lys Pro Lys Pro Leu Ser Val Leu
              1300                   1305                   1310
Lys Ser Leu Glu Glu Lys Tyr Val Ala Val Met Lys Lys Leu Gln Phe
          1315                   1320                   1325
Asp Thr Phe Glu Met Val Ser Glu Asp Glu Asp Gly Lys Leu Gly Phe
          1330                   1335                   1340
Lys Val Asn Tyr His Tyr Met Ser Gln Val Lys Asn Ala Asn Asp Ala
1345                   1350                   1355                   1360
Asn Ser Ala Ala Arg Ala Arg Arg Leu Ala Gln Glu Ala Val Thr Leu
```

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                     1365              1370              1375
        Ser Thr Ser Leu Pro Leu Ser Ser Ser Ser Ser Val Phe Val Arg Cys
              1380             1385              1390
        Asp Glu Glu Arg Leu Asp Ile Met Lys Val Leu Ile Thr Gly Pro Ala
           1395             1400             1405
        Asp Thr Pro Tyr Ala Asn Gly Cys Phe Glu Phe Asp Val Tyr Phe Pro
           1410             1415             1420
        Gln Asp Tyr Pro Ser Ser Pro Pro Leu Val Asn Leu Glu Thr Thr Gly
        1425             1430             1435              1440
        Gly His Ser Val Arg Phe Asn Pro Asn Leu Tyr Asn Asp Gly Lys Val
              1445             1450             1455
        Cys Leu Ser Ile Leu Asn Thr Trp His Gly Arg Pro Glu Glu Lys Trp
              1460             1465             1470
        Asn Pro Gln Thr Ser Ser Phe Leu Gln Val Leu Val Ser Val Gln Ser
              1475             1480             1485
        Leu Ile Leu Val Ala Glu Pro Tyr Phe Asn Glu Pro Gly Tyr Glu Arg
           1490             1495             1500
        Ser Arg Gly Thr Pro Ser Gly Thr Gln Ser Ser Arg Glu Tyr Asp Gly
        1505             1510             1515             1520
        Asn Ile Arg Gln Ala Thr Val Lys Trp Ala Met Leu Glu Gln Ile Arg
              1525             1530             1535
        Asn Pro Ser Pro Cys Phe Lys Glu Val Ile His Lys His Phe Tyr Leu
              1540             1545             1550
        Lys Arg Val Glu Ile Met Ala Gln Cys Glu Glu Trp Ile Ala Asp Ile
              1555             1560             1565
        Gln Gln Tyr Ser Ser Asp Lys Arg Val Gly Arg Thr Met Ser His His
           1570             1575             1580
        Ala Ala Ala Leu Lys Arg His Thr Ala Gln Leu Arg Glu Glu Leu Leu
        1585             1590             1595             1600
        Lys Leu Pro Cys Pro Glu Gly Leu Asp Pro Asp Thr Asp Asp Ala Pro
              1605             1610             1615
        Glu Val Cys Arg Ala Thr Thr Gly Ala Glu Glu Thr Leu Met His Asp
              1620             1625             1630
        Gln Val Lys Pro Ser Ser Ser Lys Glu Leu Pro Ser Asp Phe Gln Leu
           1635             1640             1645
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<210> 5877
<211> 683
<212> DNA
<213> Homo sapiens

<400> 5877
ngcggcggcg cgacgggcgg cggcggcggt tccagcatga aggggagagc tggcctgggg
60
ggcagcatga ggtcagtggt gggcttcttg tcccagcggg gcttgcatgg ggaccccctg
120
ctcactcagg actttcagag gagacgcctg cggggctgca gaaacctcta caagaaggac
180
ctcctcggcc acttcggctg tgtcaatgcc attgaattct ccaacaatgg aggccagtgg
240
ctggtctcag gaggagatga ccgccgggtt ctgctatggc acatggaaca agccatccac
300
tccagggtca gcccataca gctgaaagga gagcaccatt ccaacatttt ttgcctggct
360

ttcaacagtg ggaacactaa agtgttctct ggaggcaatg atgagcaagt tatcctccat
420
gatgttgaaa gcagtgagac attggacgtg tttgctcatg aagatgcagt atatggcttg
480
tctgtgagcc cagtgaatga caacattttt gccagttcct cagatgatgg ccgggttctc
540
atttgggaca ttcgggaatc cccccatgga gagcccttct gctgggcaaa ctatccatca
600
gcctttcata gtgtcatgtt taaccctgtg gagcccaggt tgttggcccc agccaattca
660
aaggaaggag tgggactctg gga
683

<210> 5878
<211> 227
<212> PRT
<213> Homo sapiens

<400> 5878
Xaa Gly Gly Ala Thr Gly Gly Gly Gly Gly Ser Ser Met Lys Gly Arg
1   5   10   15
Ala Gly Leu Gly Gly Ser Met Arg Ser Val Val Gly Phe Leu Ser Gln
                20   25   30
Arg Gly Leu His Gly Asp Pro Leu Leu Thr Gln Asp Phe Gln Arg Arg
            35   40   45
Arg Leu Arg Gly Cys Arg Asn Leu Tyr Lys Lys Asp Leu Leu Gly His
        50   55   60
Phe Gly Cys Val Asn Ala Ile Glu Phe Ser Asn Asn Gly Gly Gln Trp
65   70   75   80
Leu Val Ser Gly Gly Asp Asp Arg Arg Val Leu Leu Trp His Met Glu
                85   90   95
Gln Ala Ile His Ser Arg Val Lys Pro Ile Gln Leu Lys Gly Glu His
            100   105   110
His Ser Asn Ile Phe Cys Leu Ala Phe Asn Ser Gly Asn Thr Lys Val
        115   120   125
Phe Ser Gly Gly Asn Asp Glu Gln Val Ile Leu His Asp Val Glu Ser
    130   135   140
Ser Glu Thr Leu Asp Val Phe Ala His Glu Asp Ala Val Tyr Gly Leu
145   150   155   160
Ser Val Ser Pro Val Asn Asp Asn Ile Phe Ala Ser Ser Ser Asp Asp
                165   170   175
Gly Arg Val Leu Ile Trp Asp Ile Arg Glu Ser Pro His Gly Glu Pro
            180   185   190
Phe Cys Trp Ala Asn Tyr Pro Ser Ala Phe His Ser Val Met Phe Asn
        195   200   205
Pro Val Glu Pro Arg Leu Leu Ala Pro Ala Asn Ser Lys Glu Gly Val
    210   215   220
Gly Leu Trp
225

<210> 5879
<211> 1555
<212> DNA
<213> Homo sapiens

<400> 5879
tttttttttt tttttttttt ttttgaacag ggaaagttta atatagagaa ttactggctt
60
taacagtgaa ctggaataat gagggcttca ctggtaaaat gcttctgaat tgactggaaa
120
tccatttggg gtgctgggga acgttattcc cagagaggtg cctcagtgga ggcgctgtgt
180
ctcctacgca acttctgagg gctggagggt gccaagggca gctgctgacc gcctggtgct
240
tcaggagctg ggtgctgggg aagccacatg cactgcggcg tccagaggca gaagcacaac
300
caacaagaac cacgaaggag gcgcctttcc tcctataatg cctgtttggt gccctctact
360
gacaaagctt atcccctttc aaaaaacagc caactgaaaa agctgaattt ggaacataaa
420
gtcaataaat ccataaccag caatactatg gggcctgggg tgcgctggcc tttagtgagt
480
ggagtggggc gaaggatgct gcatgtcctg cagtgggcac agcggccctg cacggggggag
540
aaccatccct gtaaagtgtc agtagtagcc cctgtgtcag tcagggtccc tgcaagaaat
600
ggcagtgcac tcacataagg acagtttgag aagagtctcc tgacaaggtg agtgtggctc
660
tctgcggcta ctaacagcct gagcctttac ctccccaggc ctgaacaggg gcatggaaag
720
ggctgcctga cagggtgaca ggagctgtga cctttagcca agggcagcca ggaataaata
780
ctgggaactc acgctctctc ctgtgattgg ccagcaccac tcccccaccc tgacgttgag
840
tgaagacaaa tggaagccag aagtgtggtg agctaccaga cattccatgc agcccgctga
900
gaagccacgt gagtggggac agggctaaag gctaggcagg gacagggctg gctgtgtccc
960
gaggctgctc ctccggccct gacttcaggc cctcagccca gtcgactccc acaacctcgc
1020
aattgggcag catctcctcc accaatatct gagtgaggcc agggttggac acggcaggga
1080
ggtccgagat gtccagcctg cggaggttcg gaggttatcc aggccctcgt agttgatgtc
1140
acagtcaccg gcatccacag cttcgacagg cacttcacag aaattccaga actcctgaga
1200
gaaatggcca tacttatctg gcctgatcca ctccttgtct cgaaacttga ctgcgcctcc
1260
ctgcttcagg atgaaaaagg cacctgcgcc gtatggacca tgttgcttct ccagccaggt
1320
gtaagatcga tttttctcat gcaccttgta catctccctt tggagcaagt aatccctcag
1380
agcctccaca tcgtagaaat agttggtcag gaactggagt attgtccttt tcttcttctg
1440
actgccctct ggggccactg ccgcacccag gcgatggatg cccctgatac gcccattcca
1500
catgggggcg accaggcgca gggacgccca gggagccgcc atcttgctaa ggttt
1555

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<210> 5880
<211> 185
<212> PRT
<213> Homo sapiens

<400> 5880
Met Ala Ala Pro Trp Ala Ser Leu Arg Leu Val Ala Pro Met Trp Asn
1               5                   10                  15
Gly Arg Ile Arg Gly Ile His Arg Leu Gly Ala Ala Val Ala Pro Glu
            20                  25                  30
Gly Ser Gln Lys Lys Lys Arg Thr Ile Leu Gln Phe Leu Thr Asn Tyr
        35                  40                  45
Phe Tyr Asp Val Glu Ala Leu Arg Asp Tyr Leu Leu Gln Arg Glu Met
    50                  55                  60
Tyr Lys Val His Glu Lys Asn Arg Ser Tyr Thr Trp Leu Glu Lys Gln
65                  70                  75                  80
His Gly Pro Tyr Gly Ala Gly Ala Phe Phe Ile Leu Lys Gln Gly Gly
            85                  90                  95
Ala Val Lys Phe Arg Asp Lys Glu Trp Ile Arg Pro Asp Lys Tyr Gly
            100                 105                 110
His Phe Ser Gln Glu Phe Trp Asn Phe Cys Glu Val Pro Val Glu Ala
        115                 120                 125
Val Asp Ala Gly Asp Cys Asp Ile Asn Tyr Glu Gly Leu Asp Asn Leu
    130                 135                 140
Arg Thr Ser Ala Gly Trp Thr Ser Arg Thr Ser Leu Pro Cys Pro Thr
145                 150                 155                 160
Leu Ala Ser Leu Arg Tyr Trp Trp Arg Arg Cys Cys Pro Ile Ala Arg
                165                 170                 175
Leu Trp Glu Ser Thr Gly Leu Arg Ala
                180                 185

<210> 5881
<211> 327
<212> DNA
<213> Homo sapiens

<400> 5881
ngcgcgcccc ggcccgtggc ccgcgagaag acctcgctgg gcagcttgaa gcgcgccagc
60
gtggacgtgg acctgctggc cccgcgcagc cccatggcca aggagaacat ggtgaccttc
120
agccacacgc tgcccagggc cagcgcgccc tcgctggacg accccgcgcg ccgccacatg
180
accatccacg tgccgctgga cgcctcgcgc tccaagcagc tcatcagcga gtggaagcag
240
aagagcctgg agggccgcgg cctggggctg cccgacgacg ccagccccgg gcacctgcgc
300
gcgcccgccg aacccatgcc ggaggan
327

<210> 5882
<211> 109
<212> PRT
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<213> Homo sapiens

<400> 5882
Xaa Ala Pro Arg Pro Val Ala Arg Glu Lys Thr Ser Leu Gly Ser Leu
1   5   10   15
Lys Arg Ala Ser Val Asp Val Asp Leu Leu Ala Pro Arg Ser Pro Met
            20   25   30
Ala Lys Glu Asn Met Val Thr Phe Ser His Thr Leu Pro Arg Ala Ser
        35   40   45
Ala Pro Ser Leu Asp Asp Pro Ala Arg Arg His Met Thr Ile His Val
    50   55   60
Pro Leu Asp Ala Ser Arg Ser Lys Gln Leu Ile Ser Glu Trp Lys Gln
65   70   75   80
Lys Ser Leu Glu Gly Arg Gly Leu Gly Leu Pro Asp Asp Ala Ser Pro
                85   90   95
Gly His Leu Arg Ala Pro Ala Glu Pro Met Pro Glu Xaa
            100   105

<210> 5883
<211> 579
<212> DNA
<213> Homo sapiens

<400> 5883
nggtcgacct ctgcttcctt acagcacccc cacctgccag agctgatcct ccctaggccc
60
tgcctaacct tgagttggcc cccaatccct ctggctgcag aagtcccctt acccccaatg
120
agaggagggg caggaccaga tcttttgaga gctgagggtt gagggcattg agccaacaca
180
cagatttgtc gcctctgtcc ccgaagacac ctgcaccctc catgcggagc caagatgggg
240
aatggaactg aggaagatta taactttgtc ttcaaggtgg tgctgatcgg cgaatcaggt
300
gtggggaaga ccaatctact ttcccgattc acgcgcaatg agttcagcca cgacagccgc
360
accaccatcg gggttgagtt ctccacccgc actgtgatgt tgggcaccgc tgctgtcaag
420
gctcagatct gggacacagc tggtgtttga cctaaccaag caccagacct atgctgtggt
480
ggagcgatgg ctgaaggagc tctatgacca tgctgaagcc acgatcgtcg tcatgctcgt
540
gggtaacaaa agtgacctca gccaggcccg ggaagtgcc
579

<210> 5884
<211> 71
<212> PRT
<213> Homo sapiens

<400> 5884
Met Gly Asn Gly Thr Glu Glu Asp Tyr Asn Phe Val Phe Lys Val Val
1   5   10   15
Leu Ile Gly Glu Ser Gly Val Gly Lys Thr Asn Leu Leu Ser Arg Phe

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                20                    25                    30
Thr Arg Asn Glu Phe Ser His Asp Ser Arg Thr Thr Ile Gly Val Glu
        35                    40                    45
Phe Ser Thr Arg Thr Val Met Leu Gly Thr Ala Ala Val Lys Ala Gln
        50                    55                    60
Ile Trp Asp Thr Ala Gly Val
65                    70
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<210> 5885
<211> 1905
<212> DNA
<213> Homo sapiens

<400> 5885

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ggcaagggaa aaccggctgt ggagaaggaa atagggcccg gcgctgagtg agcgtggttg
60
cgtgtccttt gcagacactt tctggggcga ggtgacatgg cgagagtctt ggatcggtgg
120
acgtagacgg tagacagttc gcgtgcgttt ccttcgccta cttggcctac atgccttctg
180
cccgtgaagc gatgtttccc ctcgaaaggc cgtagacgcc gtcagaatcg gtttttcagt
240
gagttttgac ccctccgacg ctccgtctct gacagaatcg cggcgttctt cgtacccgcc
300
catcctccgc ggacgcccgc tgccatggcg actctgctgc ccctgtcct ccgtcggctc
360
tgcgggctcc cgggcctaca gcggcctgcg gcagaaatgc ccctccgggc taggagcgac
420
ggcgccggcc cgctatactc gcaccacctc cccacctccc cgctgcagaa agcgctgttg
480
gccgccggct ccgcggcgat ggcgctctat aaccccctacc gccacgacat ggtcgcagtt
540
ctaggggaga ccacaggaca ccgcaccctg aaggtcctca gggaccagat gaggagggat
600
ccagagggtg cccagatcct gcaggagcgt ccccggattt cgacatccac cctcgacctg
660
ggcaagctcc agagcctgcc ggaaggctcc ctcggtcgcg agtatctccg tttcctggat
720
gtgaacaggg tctccccaga caccgagca cccacccgct tcgtggatga tgaggagcta
780
gcgtatgtga ttcagcggta ccgggaggtg cacgacatgc ttcacaccct gctggggatg
840
cccaccaaca tcctggggga gatcgtggtg aaatggtttg aggctgtcca gactggcctg
900
cccatgtgca tcctgggtgc attctttgga ccgatccgac ttggcgctca gagcctgcaa
960
gtgctggtct cggagttgat cccatgggcc gttcagaacg gcgcagagc cccatgtgtc
1020
ctcaacctgt actatgagcg gcgctgggag cagtccctga gggctctgcg ggaggagctg
1080
ggcattacag caccacccat gcacgtccag ggcttggcct gagctcctga gccagcgggg
1140
cctggcctac ctcccccatc ccctgcttcc cttggaggca gagggctccc ttgactacct
1200
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ttgttcctct tctttgaaca ctgacccttg acaacattt atcataattt gtcataacca
1260
ctgctgagtg gccttgagga cgaaccccgc agggagcaag cagtacagtg gcattcccag
1320
ggggaccagc agctacccaa ggagaaccat gcatgaacag tatcagtcgt ctgggctcat
1380
gctgggatgt cgcagtgctc ctgttgcaac tcctcccagc cagccaggtt tgctgggggc
1440
caggctgggt gtcctcacag gagtgagggc tacacccaat tccaaaagcc tgagaagaga
1500
gaagtggagg gggaggcgag tgtgtgaata aaggctccca tcaggtcaaa aaaaaaaaa
1560
aaagaaaaca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaactccgg ggggggccc
1620
agtacccatt ttgcccttta agtgggggct atttaacctt taacttggcc ccggttttttt
1680
aaacctcttg atcttgggga aaccccgggg ggttttcccc cctttaattg ccctttttaag
1740
ggcatccccc tcttttgcca ctgggggaat ttttgccaag ggggcccccc atttagcctt
1800
tttccaagct tttggacgcc catttgggag ttggccattt tagcgttatt tttttttttt
1860
taattacggc gggactattt tgttttaaat cgaccctctt ttttt
1905


<210> 5886
<211> 265
<212> PRT
<213> Homo sapiens


<400> 5886
Met Ala Thr Leu Leu Arg Pro Val Leu Arg Arg Leu Cys Gly Leu Pro
 1               5                  10               15
Gly Leu Gln Arg Pro Ala Ala Glu Met Pro Leu Arg Ala Arg Ser Asp
            20                  25                  30
Gly Ala Gly Pro Leu Tyr Ser His His Leu Pro Thr Ser Pro Leu Gln
         35                  40                  45
Lys Ala Leu Leu Ala Ala Gly Ser Ala Ala Met Ala Leu Tyr Asn Pro
      50                  55                  60
Tyr Arg His Asp Met Val Ala Val Leu Gly Glu Thr Thr Gly His Arg
65                  70                  75                  80
Thr Leu Lys Val Leu Arg Asp Gln Met Arg Arg Asp Pro Glu Gly Ala
               85                  90                  95
Gln Ile Leu Gln Glu Arg Pro Arg Ile Ser Thr Ser Thr Leu Asp Leu
            100                 105                 110
Gly Lys Leu Gln Ser Leu Pro Glu Gly Ser Leu Gly Arg Glu Tyr Leu
            115                 120                 125
Arg Phe Leu Asp Val Asn Arg Val Ser Pro Asp Thr Arg Ala Pro Thr
         130                 135                 140
Arg Phe Val Asp Asp Glu Glu Leu Ala Tyr Val Ile Gln Arg Tyr Arg
145                 150                 155                 160
Glu Val His Asp Met Leu His Thr Leu Leu Gly Met Pro Thr Asn Ile
               165                 170                 175
Leu Gly Glu Ile Val Val Lys Trp Phe Glu Ala Val Gln Thr Gly Leu -
```

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            180                 185                 190
Pro Met Cys Ile Leu Gly Ala Phe Phe Gly Pro Ile Arg Leu Gly Ala
        195                 200                 205
Gln Ser Leu Gln Val Leu Val Ser Glu Leu Ile Pro Trp Ala Val Gln
    210                 215                 220
Asn Gly Arg Arg Ala Pro Cys Val Leu Asn Leu Tyr Tyr Glu Arg Arg
225                 230                 235                 240
Trp Glu Gln Ser Leu Arg Ala Leu Arg Glu Glu Leu Gly Ile Thr Ala
                245                 250                 255
Pro Pro Met His Val Gln Gly Leu Ala
            260                 265
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<210> 5887
<211> 3779
<212> DNA
<213> Homo sapiens

<400> 5887

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gccggcgaca gcaggcaagg cgggcggcgc ggccgtggtc atcaccgaac ccgagcacac
60
caaggagcgc gtcaaacttg aagggtcaaa gtgcaaaggg cagcttttga ttttttggggc
120
aaccaactgg gacttgattg gtcgaaaaga agtgcctaaa cagcaagctg cttaccgcaa
180
tctcggtcag aatttgtggg ggccccacag atatgggtgc ctggcggggg tccgggtgcg
240
gacagtggtc tcgggctcgt gtgctgcaca cagcctcctc atcaccacgg aagggcagct
300
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1080
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2700
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3779

<210> 5888
<211> 166
<212> PRT
<213> Homo sapiens

<400> 5888
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Glu Asp Arg Asp Thr Val Val Glu Gly Leu Arg Arg Leu Ser Asp Tyr
            20   25   30
Pro Glu Tyr Met Trp Phe Leu Leu Tyr Cys Glu Gly Thr Arg Phe Thr
        35   40   45
Glu Thr Lys His Arg Val Ser Met Glu Val Ala Ala Ala Lys Gly Leu
    50   55   60
Pro Val Leu Lys Tyr His Leu Leu Pro Arg Thr Lys Gly Phe Thr Thr
65   70   75   80
Ala Val Lys Cys Leu Arg Gly Thr Val Ala Ala Val Tyr Asp Val Thr

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                    85                90                    95
Leu Asn Phe Arg Gly Asn Lys Asn Pro Ser Leu Leu Gly Ile Leu Tyr
               100               105                   110
Gly Lys Lys Tyr Glu Ala Asp Met Cys Val Arg Arg Phe Pro Leu Glu
           115               120                   125
Asp Ile Pro Leu Asp Glu Lys Glu Ala Ala Gln Trp Leu His Lys Leu
       130               135               140
Tyr Gln Glu Lys Asp Ala Leu Gln Glu Val Lys Thr Leu Asp Gly Met
145               150               155                   160
Phe Pro Gly Glu Gln Phe
                    165


<210> 5889
<211> 2198
<212> DNA
<213> Homo sapiens

<400> 5889
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120
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780
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900
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960
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aagaaagaac tctgtgaagg tgatgtacaa gtgcctgtgg ccaaactgtg gcaaagttct
1080
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1980
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2100
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2160
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2198

<210> 5890
<211> 118
<212> PRT
<213> Homo sapiens

<400> 5890
Ala Ser Arg Pro Ser Arg Ala Val Arg Ala Gly Glu Ala Gly Arg Val
1   5   10   15
Leu Pro Leu Val Ala Gly Arg Asp Ser Leu Ala Leu Phe Pro Arg Leu
            20   25   30
Glu Cys Ser Gly Thr Ile Thr Ala His Cys Ser Leu Asp Phe Pro Gly
        35   40   45
Ser Ser His Ser Pro Thr Ser Ala Ser Gln Ala Val Gly Thr Thr Gly
    50   55   60
Glu Glu Arg Gln Gln His Gly Glu Cys Pro Val Pro Thr Pro Trp Lys

5062

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65                  70                  75                  80
Ala Val Pro Pro Gly Ser Pro Gly Val Gly Thr Gln Cys Leu Gly Gly
                85                  90                  95
Ala Leu Gly Cys Pro Thr Leu Gly Ala Thr Ala Arg Arg Gly Arg Ser
            100                 105                 110
Pro Ala Phe His His Leu
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<210> 5891
<211> 1459
<212> DNA
<213> Homo sapiens

<400> 5891
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120
gtgcgcttac agttcctaac cccgaccctg cgcgcagccc gcactatggc agccccgccg
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240
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300
cctcacgcgc tggtcatgac ctttctcttc cggaatggca gcctccagga gaagctgtgg
360
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720
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1020
tccagctgtg cagctgactt ctgtgagact ggggccagcc acactactct ctaggcctca
1080
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1200
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1320
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1459

<210> 5892
<211> 212
<212> PRT
<213> Homo sapiens

<400> 5892
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Leu Leu Arg Lys Arg Arg Tyr His Ala Ala Leu Ala Val Leu Lys Gly
             20   25   30
Phe Arg Asn Gly Ala Val Tyr Gly Ala Lys Ile Arg Ala Pro His Ala
         35   40   45
Leu Val Met Thr Phe Leu Phe Arg Asn Gly Ser Leu Gln Glu Lys Leu
     50   55   60
Trp Ala Ile Leu Gln Ala Thr Tyr Ile His Ser Trp Asn Leu Ala Arg
65   70   75   80
Phe Val Phe Thr Tyr Lys Gly Leu Arg Ala Leu Gln Ser Tyr Ile Gln
             85   90   95
Gly Lys Thr Tyr Pro Ala His Ala Phe Leu Ala Ala Phe Leu Gly Gly
             100   105   110
Ile Leu Val Phe Gly Glu Asn Asn Asn Ile Asn Ser Gln Ile Asn Met
         115   120   125
Tyr Leu Leu Ser Arg Val Leu Phe Ala Leu Ser Arg Leu Ala Val Glu
     130   135   140
Lys Gly Tyr Ile Pro Glu Pro Arg Trp Asp Pro Phe Pro Leu Leu Thr
145   150   155   160
Ala Val Val Trp Gly Leu Val Leu Trp Leu Phe Glu Tyr His Arg Ser
                 165   170   175
Thr Leu Gln Pro Ser Leu Gln Ser Ser Met Thr Tyr Leu Tyr Glu Asp
             180   185   190
Ser Asn Val Trp His Asp Ile Ser Asp Phe Leu Val Tyr Asn Lys Ser
         195   200   205
Arg Pro Ser Asn
     210

<210> 5893
<211> 1389
<212> DNA
<213> Homo sapiens

<400> 5893
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5064

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240
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1380
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1389


<210> 5894
<211> 260
<212> PRT
<213> Homo sapiens

<400> 5894
Met Val Trp Pro Ala Leu Trp Glu Leu Tyr Arg Glu Leu Gly Leu Phe
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Gln Gly Pro Ala Leu Gly Leu Arg Asn His Leu Gly Arg Lys Leu Arg
               20                25               30
Arg Arg Lys Lys Lys Lys Ala Lys Arg Thr Thr Asn Trp Lys Ile Ile
           35                40                45
Thr Asp Arg Pro Gly Phe His Asp Glu Ser Ala Ile Tyr Pro Val Gly
       50                55                60
Tyr Cys Ser Thr Arg Ile Tyr Ala Ser Met Lys Cys Pro Asp Gln Lys
65                70                75                80
Cys Leu Tyr Thr Cys Gln Ile Lys Asp Gly Gly Val Gln Pro Gln Phe
               85                90                95
Glu Ile Val Pro Glu Asp Asp Pro Gln Asn Ala Ile Val Ser Ser Ser
               100               105               110
Ala Asp Ala Cys His Ala Glu Leu Leu Arg Thr Ile Ser Thr Thr Met
           115               120               125
Gly Lys Leu Met Pro Asn Leu Leu Pro Ala Gly Ala Asp Phe Phe Gly
       130               135               140
Phe Ser His Pro Ala Ile His Asn Leu Ile Gln Ser Cys Pro Gly Ala
145               150               155               160
Arg Lys Cys Ile Asn Tyr Gln Trp Val Lys Phe Asp Val Cys Lys Pro
               165               170               175
Gly Asp Gly Gln Leu Pro Glu Gly Leu Pro Glu Asn Asp Ala Ala Met
               180               185               190
Ser Phe Glu Ala Phe Gln Arg Gln Ile Phe Asp Glu Asp Gln Asn Asp
           195               200               205
Pro Leu Leu Pro Gly Ser Leu Asp Leu Pro Glu Leu Gln Pro Ala Ala
       210               215               220
Phe Val Ser Ser Tyr Gln Pro Met Tyr Leu Thr His Glu Pro Leu Val
225               230               235               240
Asp Thr His Leu Gln His Leu Lys Ser Pro Ser Gln Gly Ser Pro Ile
               245               250               255
Gln Ser Ser Asp
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<210> 5895
<211> 2748
<212> DNA
<213> Homo sapiens

<400> 5895

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120
gccacagagg cagtggcgat tttgacagcc acataccctg tgggtcacat gccatacggc
180
tggttgacgg aaatccgtgc tgtgtatcct gctttcgaca agaataaccc cagcaacaaa
240
ctggtgagca cgagcaacac agtcacggca gcccacatca agaagttcac cttcgtctgc
300
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360
atcttgatag acatcatcgg agtggacttt gcctttgcag aactctgtgt tgttcctttg
420
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cggatcttct cctgcttcgc agttccagtc acagtgaggg cgcatctcac cgggtggctg
480

atgacactga agaaaacctt cgtccttgcc cccagctctg tgctgcggat catcgtcctc
540

atcgccagcc tcgtggtcct accctacctg ggggtgcacg gtgcgaccct gggcgtgggc
600

tccctcctgg cgggctttgt gggagaatcc accatggtcg ccatcgctgc gtgctatgtc
660

taccggaagc agaaaaagaa gatggagaat gagtcggcca cggaggggga agactctgcc
720

atgacagaca tgcctccgac agaggaggtg acagacatcg tggaaatgag agaggagaat
780

gaataaggca cgggacgcca tgggcactgc agggacagtc agtcaggatg acacttcggc
840

atcatctctt ccctctccca tcgtattttg ttcctttttt tttgttttgt tttggtaatg
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aaagaggcct tgatttaaag gtttcgtgtc aattctctag catactgggt atgctcacac
960

tgacgggggg acctagtgaa tggtctttac tgttgctatg taaaaacaaa cgaaacaact
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1080

tgtcctcctc ccctggacaa tctcctcttg gaaccaaagg actgcagctg tgccatcgcg
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1260

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ttctcctaga tctgagcaag ctgtcagttc tcaccccac cgtgtatata catgagctaa
1560

ctttttaaa ttgtcacaaa agcgcatctc cagattccag accctgccgc atgacttttc
1620

ctgaaggctt gctttttcct cgcctttcct gaaggtcgca ttagagcgag tcacatggag
1680

catcctaact ttgcatttta gtttttacag tgaactgaag ctttaagtaa gtctcatcca
1740

gcattctaat gccaggttgc tgtagggtaa cttttgaagt agatatatta cctggttctg
1800

ctatccttag tcataactct gcggtacagg taattgagaa tgtactacgg tacttccctc
1860

ccacaccata cgataaagca agacatttta taacgatacc agagtcacta tgtggtcctc
1920

cctgaaataa cgcattcgaa atccatgcag tgcagtatat ttttctaagt tttggaaagc
1980

aggttttttc ctttaaaaaa attatagaca cggttcacta aattgattta gtcagaattc
2040

```
ctagactgaa agaacctaaa caaaaaaata ttttaaagat ataaatatat gctgtatatg
2100
ttatgtaatt tattttaggc tataatacat ttcctatttt cgcattttca ataaaatgtc
2160
tctaatacaa tacggtgatt gcttgtgtgc tcaacatacc tgcagttgaa acgtattgta
2220
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2280
gtaaggctca gtaaatgaca gaactatttt tcattatggg taactgggga ataaatgggt
2340
cactggagta ggaatagaag tgcaagctgg aaaggcaaaa atgagaaaga aaaaggcagg
2400
ccctttgtgt ctaccgtttt cagtgctgtg tgatcatatt gttcctcaca gcaaaaaaga
2460
atgcaagggc ataatgttag ctgtgaacat gccagggttg cattcacatt cctgggtacc
2520
cagtgctgat ggggtgtgcc cacgtgggga catgtccttg gcgtgcttcc tcagagtggc
2580
ttttcctcca ttaatacata tatgagtact gaagaattaa tttgcatagc tgctttgcag
2640
tggtttcaga ggcagatctg agaagattaa aaaaaaatct caatgtatca gctttttta
2700
aaggacatta ctagaaaatt aaacagtatt ttttaacaaa aaaaaaaa
2748


<210> 5896
<211> 261
<212> PRT
<213> Homo sapiens


<400> 5896
Ala Thr Ile Arg Lys Met Leu Ser Phe Trp Trp Pro Leu Xaa Leu Ile
1               5                   10                  15
Leu Ala Thr Gln Arg Ile Ser Arg Pro Ile Val Asn Leu Phe Val Ser
                20                  25                  30
Arg Asp Leu Gly Gly Ser Ser Ala Ala Thr Glu Ala Val Ala Ile Leu
            35                  40                  45
Thr Ala Thr Tyr Pro Val Gly His Met Pro Tyr Gly Trp Leu Thr Glu
        50                  55                  60
Ile Arg Ala Val Tyr Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys
65                  70                  75                  80
Leu Val Ser Thr Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe
                85                  90                  95
Thr Phe Val Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe
                100                 105                 110
Trp Thr Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val
            115                 120                 125
Asp Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser
        130                 135                 140
Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp Leu
145                 150                 155                 160
Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val Leu Arg
                165                 170                 175
Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr Leu Gly Val
```

```
          180                    185                    190
His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala Gly Phe Val Gly
          195                    200                    205
Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr Val Tyr Arg Lys Gln
          210                    215                    220
Lys Lys Lys Met Glu Asn Glu Ser Ala Thr Glu Gly Glu Asp Ser Ala
225                    230                    235                    240
Met Thr Asp Met Pro Pro Thr Glu Glu Val Thr Asp Ile Val Glu Met
                    245                    250                    255
Arg Glu Glu Asn Glu
                    260
```

<210> 5897
<211> 1930
<212> DNA
<213> Homo sapiens

<400> 5897

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caccacaatg cctggtaatc actctgcccc ttcgcccggc ctgtcgctga ccctctgtcc
120
cgccgcctcg gagcattccg aaaagcccct gaccgccggc cacgagtcaa gctgccctac
180
ccggccacga gtcaagctgc cctacccgag gcactctcca aggggagaga aactcctagg
240
ccagcgactc accctgcccg cagccaggac gtgaagcccc taagctgccc gtttgatttt
300
ctcagggaca atgtggagtg gtcggaagag caagccgcgg cggcggagag aaaagtccag
360
gagaacagta tccagcgggt gtgccaggag aaacaagttg attatgagat caatgcccac
420
aaatactgga atgacttcta caaaatccac gaaaatgggt ttttcaagga tagacattgg
480
ctttttaccg aattccctga gctggcacct agccaaaatc aaaatcattt gaaggactgg
540
ttcttggaga acaagagtga agtatgtgaa tgtagaaaca atgaggatgg acctggttta
600
ataatggaag aacagcacaa gtgttcttcg aagagccttg aacataaaac acagacacct
660
cctgtggagg agaatgtaac tcagaaaatt agtgacctgg aaatttgtgc tgatgagttt
720
cctggatcct cagccaccta ccgaatactg gaggttggct gtggtgtggg aaacacagtc
780
tttccaattt tacaaacgaa caatgaccca ggactctttg tttattgctg tgattttttct
840
tccacagcta tagaactggt ccagacaaat tcagaatatg atccttctcg gtgttttgcc
900
tttgttcacg acctgtgtga tgaagagaag agttacccag tgcccaaggg cagtcttgat
960
attatcattc tcatatttgt tctttcagca attgttccag acaagatgca gaaggctatc
1020
aacaggctga gcaggcttct gaaacctggg gggatggtac ttctgcgaga ttacggccgc
1080
```

```
tatgacatgg ctcagcttcg gtttaaaaaa ggtcagtgtc tatctggaaa tttctacgtg
1140
agaggtgatg gaaccagagt ttacttcttc acacaagagg aactggacac gcttttcacc
1200
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1260
aagcaactga caatgtaccg ggtttggatt cagtgcaaat actgcaagcc ccttctgtcc
1320
agcaccagct gagaggcacc tgctgccaac acgatgcaag cccattgtgt ttccgggctt
1380
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1440
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1500
accctgtatc tgaaagtaat aataaaaata aagaatata aatgaggtct cgttgatgtt
1560
ggacaattca agaattcaga cttgaacctt aaacctagga aaagttactt tgtatcagga
1620
ttctaacaat tatgcttcat atttgtgaag tcctttaaaa cataattttc tcaagttctt
1680
tctttgagat ctcaatctgt cttagcattt tgtaactaat aactgaaatt ttattcaaag
1740
gaattgtaaa ccttaaacca ccaatttatt tccatgtgaa aaagtgttat atatgacaag
1800
tgttttttga ttgtaattgc gttaaatctt ttgagagtgt aaatgccggc aaagtttcgc
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1920
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1930
```

```
<210> 5898
<211> 242
<212> PRT
<213> Homo sapiens
```

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<400> 5898
Met Glu Glu Gln His Lys Cys Ser Ser Lys Ser Leu Glu His Lys Thr
1               5                   10                  15
Gln Thr Pro Pro Val Glu Glu Asn Val Thr Gln Lys Ile Ser Asp Leu
            20                  25                  30
Glu Ile Cys Ala Asp Glu Phe Pro Gly Ser Ser Ala Thr Tyr Arg Ile
        35                  40                  45
Leu Glu Val Gly Cys Gly Val Gly Asn Thr Val Phe Pro Ile Leu Gln
    50                  55                  60
Thr Asn Asn Asp Pro Gly Leu Phe Val Tyr Cys Cys Asp Phe Ser Ser
65                  70                  75                  80
Thr Ala Ile Glu Leu Val Gln Thr Asn Ser Glu Tyr Asp Pro Ser Arg
                85                  90                  95
Cys Phe Ala Phe Val His Asp Leu Cys Asp Glu Glu Lys Ser Tyr Pro
            100                 105                 110
Val Pro Lys Gly Ser Leu Asp Ile Ile Ile Leu Ile Phe Val Leu Ser
            115                 120                 125
Ala Ile Val Pro Asp Lys Met Gln Lys Ala Ile Asn Arg Leu Ser Arg
```

```
        130                    135                    140
Leu Leu Lys Pro Gly Gly Met Val Leu Leu Arg Asp Tyr Gly Arg Tyr
145                    150                    155                    160
Asp Met Ala Gln Leu Arg Phe Lys Lys Gly Gln Cys Leu Ser Gly Asn
                165                    170                    175
Phe Tyr Val Arg Gly Asp Gly Thr Arg Val Tyr Phe Phe Thr Gln Glu
                180                    185                    190
Glu Leu Asp Thr Leu Phe Thr Thr Ala Gly Leu Glu Lys Val Gln Asn
                195                    200                    205
Leu Val Asp Arg Arg Leu Gln Val Asn Arg Gly Lys Gln Leu Thr Met
        210                    215                    220
Tyr Arg Val Trp Ile Gln Cys Lys Tyr Cys Lys Pro Leu Leu Ser Ser
225                    230                    235                    240
Thr Ser
```

<210> 5899
<211> 1589
<212> DNA
<213> Homo sapiens

<400> 5899
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gaggagatta acaaagttgg aaaggaactg gggatcatcc caaccatcat ccgggatgag
120
gaactgaaga cgagaggatt tggaggaatc tatggggttg gcaaagccgc cctgcatccc
180
ccagccctgg ccgtcctcag ccacacccca gatggagcca cgcagaccat cgcctgggtg
240
ggcaaaggca tcgtctatga cactggaggc ctcagcatca aagggaagac taccatgccg
300
gggatgaagc gagactgcgg gggtgctgcg gccgtcctgg gggccttcag agccgcaatc
360
aagcagggtt tcaaagacaa cctccacgct gtgttctgct tggctgagaa ctcggtgggg
420
cccaatgcga caaggccaga tgacatccac ctgctgtact cagggaagac ggtggaaatc
480
aacaacacgg atgccgaggg caggctggtg ctggcagatg gcgtgtccta tgcttgcaag
540
gacctggggg ccgacatcat cctggacatg gccaccctga ccggggctca gggcattgcc
600
acagggaagt accacgccgc ggtgctcacc aacagcgctg agtgggaggc cgcctgtgtg
660
aaggcgggca ggaagtgtgg ggacctggtg cacccgctgg tctactgccc cgagctgcac
720
ttcagcgagt tcacctcagc tgtggcggac atgaagaact cagtggcgga ccgagacaac
780
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840
gtctgggtcc acctggacat tgctgcaccg gtgcatgctg tgagcgagc cacaggcttc
900
ggtgtggccc tcctgctggc gctcttcggc cgtgcctctg aggaccctct gctgaacctg
960
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```
gtgtccccac tgggctgtga ggtggatgtc gaggaggggg acctggggag ggactccaag
1020
agacgcaggc ttgtgtgagc ctcctgcctc ggccctgaca aacggggatc ttttacctca
1080
ctttgcactg attaatttta agcaattgaa agattgccct tcatatgggt tttggtttgt
1140
ctttctggtc gtcagcgtgg tggtggaaac agctgaagtt ttaggagaca gcttagggtt
1200
tggtgcgggc cacggggagg ggaccgggaa gcgctggggc ttgtttctgt ttgttactta
1260
caggactgag acatcttctg taaactgcta cccctggggc cttctgcacc ccggggtgag
1320
gcctcctgcc tgcctggtgc cctgtcccag ccccaggtcc tgtgcagggc acctgcgtgg
1380
ctgacagcca ggctcttact ccagccgggg ctgccagcgc atccagccag cccagccctg
1440
tgaaagatgg agctgacttg ctgcagggga cctgatttat agggcaagag aagtcacact
1500
ccggcctctc agaattcact tgaggttcaa ttaaatacag tcacaccgcc ccctcaaaaa
1560
aaaaaaaaaa aaaaaaaaca aaaaaaaaa
1589
```

```
<210> 5900
<211> 345
<212> PRT
<213> Homo sapiens
```

```
<400> 5900
Xaa Leu Ala Ala Arg Ile Val Asp Thr Pro Cys Asn Glu Met Asn Thr
 1               5                  10                  15
Asp Thr Phe Leu Glu Glu Ile Asn Lys Val Gly Lys Glu Leu Gly Ile
            20                  25                  30
Ile Pro Thr Ile Ile Arg Asp Glu Glu Leu Lys Thr Arg Gly Phe Gly
            35                  40                  45
Gly Ile Tyr Gly Val Gly Lys Ala Ala Leu His Pro Pro Ala Leu Ala
        50                  55                  60
Val Leu Ser His Thr Pro Asp Gly Ala Thr Gln Thr Ile Ala Trp Val
65                  70                  75                  80
Gly Lys Gly Ile Val Tyr Asp Thr Gly Gly Leu Ser Ile Lys Gly Lys
                85                  90                  95
Thr Thr Met Pro Gly Met Lys Arg Asp Cys Gly Gly Ala Ala Ala Val
            100                 105                 110
Leu Gly Ala Phe Arg Ala Ala Ile Lys Gln Gly Phe Lys Asp Asn Leu
        115                 120                 125
His Ala Val Phe Cys Leu Ala Glu Asn Ser Val Gly Pro Asn Ala Thr
        130                 135                 140
Arg Pro Asp Asp Ile His Leu Leu Tyr Ser Gly Lys Thr Val Glu Ile
145                 150                 155                 160
Asn Asn Thr Asp Ala Glu Gly Arg Leu Val Leu Ala Asp Gly Val Ser
                165                 170                 175
Tyr Ala Cys Lys Asp Leu Gly Ala Asp Ile Ile Leu Asp Met Ala Thr
            180                 185                 190
Leu Thr Gly Ala Gln Gly Ile Ala Thr Gly Lys Tyr His Ala Ala Val
```

```
        195                    200                    205
Leu Thr Asn Ser Ala Glu Trp Glu Ala Ala Cys Val Lys Ala Gly Arg
    210                    215                    220
Lys Cys Gly Asp Leu Val His Pro Leu Val Tyr Cys Pro Glu Leu His
225                    230                    235                    240
Phe Ser Glu Phe Thr Ser Ala Val Ala Asp Met Lys Asn Ser Val Ala
                245                    250                    255
Asp Arg Asp Asn Ser Pro Ser Ser Cys Ala Gly Leu Phe Ile Ala Ser
                260                    265                    270
His Ile Gly Phe Asp Trp Pro Gly Val Trp Val His Leu Asp Ile Ala
        275                    280                    285
Ala Pro Val His Ala Gly Glu Arg Ala Thr Gly Phe Gly Val Ala Leu
    290                    295                    300
Leu Leu Ala Leu Phe Gly Arg Ala Ser Glu Asp Pro Leu Leu Asn Leu
305                    310                    315                    320
Val Ser Pro Leu Gly Cys Glu Val Asp Val Glu Glu Gly Asp Leu Gly
                325                    330                    335
Arg Asp Ser Lys Arg Arg Arg Leu Val
                340                    345
```

<210> 5901
<211> 984
<212> DNA
<213> Homo sapiens

<400> 5901
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120
ctggtgaagc tgtgcagtgg catggtggaa gccggtaagg cctacgtcag caccagcagg
180
cttttcgtga gcggcgtccg cgacctgtcc cagcagtgcc agggcgacac cgtcatctcg
240
gaatgtctgc agaggttcgc tgacagccta caggaggtgg tgaactacca catgatcctg
300
tttgaccagg cccagaggtc cgtgcggcag cagctccaga gctttgtcaa agaggatgtg
360
cggaagttca aggagacaaa gaagcagttt gacaaggtgc gggaggacct ggagctgtcc
420
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480
gccctcaccc tcaccaggaa gtgcttccgc cacctggcac tggactatgt gctccagatc
540
aatgttctgc aggccaagaa gaagtttgag atcctggact ctatgctgtc cttcatgcac
600
gcccagtcca gcttcttcca gcagggctac agcctcctgc accagctgga cccctacatg
660
aagaagctgg cagccgagct ggaccagctg gtgatcgact ctgcggtgga aaagcgtgag
720
atggagcgaa agcacgccgc catccagcag cggacccta gggacttctc ctacgatgag
780
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840
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aagagggcca gcaacncttt caagacatgg aaccggcgct ggttctccat tcagaacagc
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cagctggtct accagaagaa gctcaaggat gccctcaccg tggtggtgga tgacctccgc
960
ctgtgctctg tgaagccgtg tgag
984

<210> 5902
<211> 328
<212> PRT
<213> Homo sapiens

<400> 5902
Xaa Ala Ala Ala Ala Met Thr Val Glu Phe Glu Glu Cys Val Lys Asp
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Ser Pro Arg Phe Arg Ala Thr Ile Asp Glu Val Glu Thr Asp Val Val
                20   25   30
Glu Ile Glu Ala Lys Leu Asp Lys Leu Val Lys Leu Cys Ser Gly Met
            35   40   45
Val Glu Ala Gly Lys Ala Tyr Val Ser Thr Ser Arg Leu Phe Val Ser
        50   55   60
Gly Val Arg Asp Leu Ser Gln Gln Cys Gln Gly Asp Thr Val Ile Ser
65   70   75   80
Glu Cys Leu Gln Arg Phe Ala Asp Ser Leu Gln Glu Val Val Asn Tyr
                85   90   95
His Met Ile Leu Phe Asp Gln Ala Gln Arg Ser Val Arg Gln Gln Leu
            100   105   110
Gln Ser Phe Val Lys Glu Asp Val Arg Lys Phe Lys Glu Thr Lys Lys
        115   120   125
Gln Phe Asp Lys Val Arg Glu Asp Leu Glu Leu Ser Leu Val Arg Asn
    130   135   140
Ala Gln Ala Pro Arg His Arg Pro His Glu Val Glu Glu Ala Thr Gly
145   150   155   160
Ala Leu Thr Leu Thr Arg Lys Cys Phe Arg His Leu Ala Leu Asp Tyr
                165   170   175
Val Leu Gln Ile Asn Val Leu Gln Ala Lys Lys Lys Phe Glu Ile Leu
            180   185   190
Asp Ser Met Leu Ser Phe Met His Ala Gln Ser Ser Phe Phe Gln Gln
            195   200   205
Gly Tyr Ser Leu Leu His Gln Leu Asp Pro Tyr Met Lys Lys Leu Ala
        210   215   220
Ala Glu Leu Asp Gln Leu Val Ile Asp Ser Ala Val Glu Lys Arg Glu
225   230   235   240
Met Glu Arg Lys His Ala Ala Ile Gln Gln Arg Thr Leu Arg Asp Phe
                245   250   255
Ser Tyr Asp Glu Ser Lys Val Glu Phe Asp Val Asp Ala Pro Ser Gly
            260   265   270
Val Val Met Glu Gly Tyr Leu Phe Lys Arg Ala Ser Asn Xaa Phe Lys
        275   280   285
Thr Trp Asn Arg Arg Trp Phe Ser Ile Gln Asn Ser Gln Leu Val Tyr
    290   295   300
Gln Lys Lys Leu Lys Asp Ala Leu Thr Val Val Val Asp Asp Leu Arg
305   310   315   320
Leu Cys Ser Val Lys Pro Cys Glu

325

<210> 5903
<211> 3734
<212> DNA
<213> Homo sapiens

<400> 5903
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aggggacctc tggcacacgc tccatgcccg cctgcccctc cagatctgtc cccaagccaa
120
gcaggggacc tcacttaatc ccaattatgt aatctgcaat ttaaacagtt ggcccatgag
180
gaggcgcttg gagccacgcc caggagtggg ggcaaaagga cccagctggg tcagggctga
240
caaactaggc ttggcctctt gcctatagtg gccaccactc ctcaagcccc agccagcacg
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atgagcggca gagtcggcga tctgagcccc aggcagaagg aggcattggc caagtttcgg
360
gagaatgtcc aggatgtgct gccggccctg ccgaatccag atgactattt tctcctgcgt
420
tggctccgag ccagaagctt cgacctgcag aagtcggagg ccatgctccg gaagcatgtg
480
gagttccgaa agcaaaagga cattgacaac atcattagct ggcagcctcc agaggtgatc
540
caacagtatc tgtcaggggg tatgtgtggc tatgacctgg atggctgccc agtctggtac
600
gacataattg gacctctgga tgccaagggt ctcctgctgt cagcctccaa gcaggatatg
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720
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1020
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1140
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1200
tgtgtcctca ggtggcagtt tctgtgagat ggagcggatg ttggttttgg gattttcctg
1260
aagaccaaga tgggagagag gcagcgggca ggggagatga cagaggtgct gcccaaccag
1320
aggtacaact cccacctggt ccctgaagat gggaccctca cctgcagtga tcctggcatc
1380

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1440
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1500
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1560
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1620
ggacagacct caggagcttt catttcagtt aggcagagga agagcgactg cagtgggtct
1680
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1800
gggggcatgt accacagggt ggcagcaggg aaaaaaatta gaaaagggtg aaagattggg
1860
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1920
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1980
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2040
aggaggtggc ctgagtcagc acacatcttc ccactcggta gacaggctgg cctctccctc
2100
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2160
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2220
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2280
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2340
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2400
gcactcggag agggtgtttg ccagtctgag tgtcccgcgg tgcccgccaa cccgcttcct
2460
gactgacctg agcaaggtct tactaagcag tcccatctct gtgggaggca tgcaacgcgt
2520
gcagggagtt caggtgccgg tcggcgtagc caggcctgga ggccccccag gcaggaggcc
2580
gcccaaaggc ggggccggcg tctcgcagac taggggctgg gggcggccac agacggcctc
2640
gaaaccacag cccttacccc aatcccacga gccccgccaa cgaaccacag gtgctgggct
2700
ttagagaaca tgggaaggcg gccccagacc tggcgggaac gcctttccct cagagccagg
2760
ccccggcccc gtctgggaag ctcatcttgc gaagctgagg gagctcaggg caaaggccag
2820
gctagcgcgg accggaaggg gccgaggctg cacgggcctc tgccagaacg ctcaagacat
2880
cccggcctgg gtttacaacg ctgttaggaa aattaaccaa tgaataaagc aacgttcagt
2940
gcgcagggag tgaaattcaa tgcccaccgc taggctcctc gctgcctctc actcaagagg
3000
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cccaaactca gacggcgtca gggacccgga cccagcagcc gtttcacgcc aatagatagg
3060
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3240
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3360
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3540
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3600
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3734

<210> 5904
<211> 308
<212> PRT
<213> Homo sapiens

<400> 5904
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Ala Lys Phe Arg Glu Asn Val Gln Asp Val Leu Pro Ala Leu Pro Asn
            20   25   30
Pro Asp Asp Tyr Phe Leu Leu Arg Trp Leu Arg Ala Arg Ser Phe Asp
            35   40   45
Leu Gln Lys Ser Glu Ala Met Leu Arg Lys His Val Glu Phe Arg Lys
        50   55   60
Gln Lys Asp Ile Asp Asn Ile Ile Ser Trp Gln Pro Pro Glu Val Ile
65   70   75   80
Gln Gln Tyr Leu Ser Gly Gly Met Cys Gly Tyr Asp Leu Asp Gly Cys
                85   90   95
Pro Val Trp Tyr Asp Ile Ile Gly Pro Leu Asp Ala Lys Gly Leu Leu
            100   105   110
Leu Ser Ala Ser Lys Gln Asp Met Ile Arg Lys Gly Ile Lys Val Cys
        115   120   125
Glu Leu Leu Leu His Glu Cys Glu Leu Gln Thr Gln Lys Leu Gly Arg
    130   135   140
Lys Ile Glu Met Ala Leu Met Val Phe Asp Met Glu Gly Leu Ser Leu
145   150   155   160
Lys His Leu Trp Lys Pro Ala Val Glu Val Tyr Gln Gln Phe Phe Ser

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                  165                    170                    175
Ile Leu Glu Ala Asn Tyr Pro Glu Thr Leu Lys Asn Leu Ile Val Ile
            180                    185                    190
Arg Ala Pro Lys Leu Phe Pro Met Ala Phe Asn Leu Val Lys Ser Phe
            195                    200                    205
Met Ser Glu Asp Thr Arg Lys Lys Ile Met Val Leu Gly Ala Asn Trp
    210                    215                    220
Lys Glu Val Leu Leu Lys His Ile Ser Pro Asp Gln Val Pro Val Glu
225                    230                    235                    240
Tyr Gly Gly Thr Met Thr Asp Pro Asp Gly Asn Pro Lys Cys Lys Ser
                245                    250                    255
Lys Ile Asn Tyr Gly Gly Asp Ile Pro Arg Lys Tyr Tyr Val Arg Asp
            260                    265                    270
Gln Val Lys Gln Gln Tyr Glu His Ser Val Gln Ile Ser Arg Gly Ser
        275                    280                    285
Ser Gln Gln Val Glu Tyr Glu Ile Leu Phe Pro Gly Cys Val Leu Arg
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Trp Gln Phe Leu
305
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<210> 5905
<211> 2280
<212> DNA
<213> Homo sapiens

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120
attgtgacag cattatacag agaggcccgg atgcctccca cagacacgta gaatccttga
180
gaattatcaa taatctcata aattgtttga gatttgatgg agctaagctt ctccatggcc
240
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300
catggaggcg tgttgtacaa ggagctgttt ccagcctgca ccttgtattc caggaccgag
360
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420
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480
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540
ataaagtcaa actccacacc atgcaccgtc tcatttgcgc aataatacac gtaggaggca
600
tctgggttga ggtttgactt tatacccgat gtcaagggag cagtactggt ttgtgacatg
660
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720
gcccagaaga atgttggctc tgctggggtc accgtggtga ttgtccgtga tgacctgctg
780
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840
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960
atttatgaga ttattgataa ttctcaagga ttctacgttt gtccagtgga gccccaaaat
1020
agaagcaaga tgaatattcc attccgcatt ggcaatgcca aggagatga tgctttagaa
1080
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1140
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1200
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1320
taacacagta tttttctcaa atgaacatgt ttattgcaga ttcttctttt ttgaaagaac
1380
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1440
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1680
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1740
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1860
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1920
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1980
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2040
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2100
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2160
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<210> 5906
<211> 215
<212> PRT
<213> Homo sapiens
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<400> 5906
Glu Ala Ser Gly Leu Arg Phe Asp Phe Ile Pro Asp Val Lys Gly Ala
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Val Leu Val Cys Asp Met Ser Ser Asn Phe Leu Ser Lys Pro Val Asp
            20   25   30
Val Ser Lys Phe Arg Val Ile Phe Ala Gly Ala Gln Lys Asn Val Gly
        35   40   45
Ser Ala Gly Val Thr Val Val Ile Val Arg Asp Asp Leu Leu Gly Phe
    50   55   60
Ala Leu Arg Glu Cys Pro Ser Val Leu Glu Tyr Lys Val Gln Ala Gly
65   70   75   80
Asn Ser Ser Leu Tyr Asn Thr Pro Pro Cys Phe Ser Ile Tyr Val Met
                85   90   95
Gly Leu Val Leu Glu Trp Ile Lys Asn Asn Gly Gly Ala Ala Ala Met
            100   105   110
Glu Lys Leu Ser Ser Ile Lys Ser Leu Thr Ile Tyr Glu Ile Ile Asp
        115   120   125
Asn Ser Gln Gly Phe Tyr Val Cys Pro Val Glu Pro Gln Asn Arg Ser
    130   135   140
Lys Met Asn Ile Pro Phe Arg Ile Gly Asn Ala Lys Gly Asp Asp Ala
145   150   155   160
Leu Glu Lys Arg Phe Leu Asp Lys Ala Leu Glu Leu Asn Met Leu Ser
                165   170   175
Leu Lys Gly His Arg Ser Val Gly Gly Ile Arg Ala Ser Leu Tyr Asn
            180   185   190
Ala Val Thr Ile Glu Asp Val Gln Lys Leu Ala Ala Phe Met Lys Lys
        195   200   205
Phe Leu Glu Met His Gln Leu
    210   215

<210> 5907
<211> 1989
<212> DNA
<213> Homo sapiens

<400> 5907
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120
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180
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360
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420
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540

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600
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660
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720
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900
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1020
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1320
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1380
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1980
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1989

<210> 5908
<211> 454
<212> PRT

<213> Homo sapiens

<400> 5908
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            20                  25                  30
Gln Ile Ala Ala Ser Ala Glu Leu Glu Ser Gly Ala Met Pro Trp Ser
        35                  40                  45
Leu Leu Gln His Ile Asp Glu Arg Asp Arg Ala Gly Leu Leu Pro Ala
    50                  55                  60
Leu Phe Lys Val Leu Ser Val Gly Arg Gly Gly Ser Pro Arg Leu Gln
65                  70                  75                  80
Pro Asp Ser Arg Ala Leu His Tyr Met Lys Lys Leu Tyr Lys Thr Tyr
            85                  90                  95
Ala Thr Lys Glu Gly Ile Pro Lys Ser Asn Arg Ser His Leu Tyr Asn
            100                 105                 110
Thr Val Arg Leu Phe Thr Pro Cys Thr Arg His Lys Gln Ala Pro Gly
        115                 120                 125
Asp Gln Val Thr Gly Ile Leu Pro Ser Val Glu Leu Leu Phe Asn Leu
    130                 135                 140
Asp Arg Ile Thr Thr Val Glu His Leu Leu Lys Ser Val Leu Leu Tyr
145                 150                 155                 160
Asn Ile Asn Asn Ser Val Ser Phe Ser Ser Ala Val Lys Cys Val Cys
            165                 170                 175
Asn Leu Met Ile Lys Glu Pro Lys Ser Ser Ser Arg Thr Leu Gly Arg
            180                 185                 190
Ala Pro Tyr Ser Phe Thr Phe Asn Ser Gln Phe Glu Phe Gly Lys Lys
            195                 200                 205
His Lys Trp Ile Gln Ile Asp Val Thr Ser Leu Leu Gln Pro Leu Val
    210                 215                 220
Ala Ser Asn Lys Arg Ser Ile His Met Ser Ile Asn Phe Thr Cys Met
225                 230                 235                 240
Lys Asp Gln Leu Glu His Pro Ser Ala Gln Asn Gly Leu Phe Asn Met
            245                 250                 255
Thr Leu Val Ser Pro Ser Leu Ile Leu Tyr Leu Asn Asp Thr Ser Ala
            260                 265                 270
Gln Ala Tyr His Ser Trp Tyr Ser Leu His Tyr Lys Arg Arg Pro Ser
            275                 280                 285
Gln Gly Pro Asp Gln Glu Arg Ser Leu Ser Ala Tyr Pro Val Gly Glu
    290                 295                 300
Glu Ala Ala Glu Asp Gly Arg Ser Ser His His Arg His Arg Arg Gly
305                 310                 315                 320
Gln Glu Thr Val Ser Ser Glu Leu Lys Lys Pro Leu Gly Pro Ala Ser
            325                 330                 335
Phe Asn Leu Ser Glu Tyr Phe Arg Gln Phe Leu Leu Pro Gln Asn Glu
            340                 345                 350
Cys Glu Leu His Asp Phe Arg Leu Ser Phe Ser Gln Leu Lys Trp Asp
            355                 360                 365
Asn Trp Ile Val Ala Pro His Arg Tyr Asn Pro Arg Tyr Cys Lys Gly
    370                 375                 380
Asp Cys Pro Arg Ala Val Gly His Arg Tyr Gly Ser Pro Val His Thr
385                 390                 395                 400
Met Val Gln Asn Ile Ile Tyr Glu Lys Leu Asp Ser Ser Val Pro Arg
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                    405                    410                    415
Pro Ser Cys Val Pro Ala Lys Tyr Ser Pro Leu Ser Val Leu Thr Ile
            420                    425                    430
Glu Pro Asp Gly Ser Ile Ala Tyr Lys Glu Tyr Glu Asp Met Ile Ala
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Thr Lys Cys Thr Cys Arg
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<210> 5909
<211> 4343
<212> DNA
<213> Homo sapiens
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gaagcggcgg cggcggcgcc gggcccgggg gtggtgacag caggtctgag gttgcatcat
240
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300
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360
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420
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480
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720
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780
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960
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1020
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1080
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1140
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1200
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aaaatacctc aggaaaggcc aacatcagca gaactattaa ggcatgactt tgttcgacga
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1380
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2100
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2820
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3600
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3660
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4343
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<210> 5910

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<211> 899
<212> PRT
<213> Homo sapiens

<400> 5910
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                20                  25                  30
Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
            35                  40                  45
Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
        50                  55                  60
Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
65                  70                  75                  80
His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
                85                  90                  95
Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
            100                 105                 110
Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
        115                 120                 125
His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
    130                 135                 140
His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln
145                 150                 155                 160
Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn
                165                 170                 175
Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala
                180                 185                 190
Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Ile Trp Ser Leu Gly
        195                 200                 205
Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met
    210                 215                 220
Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr
225                 230                 235                 240
Leu Gln Ser Asn Glu Trp Thr Asp Ser Phe Arg Arg Phe Val Asp Tyr
                245                 250                 255
Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu
            260                 265                 270
Arg His Asp Phe Val Arg Arg Asp Arg Pro Leu Arg Val Leu Ile Asp
        275                 280                 285
Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln
    290                 295                 300
Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro
305                 310                 315                 320
Leu Asn Glu Ser Gln Glu Asp Glu Glu Asp Ser Glu His Gly Thr Ser
                325                 330                 335
Leu Asn Arg Glu Met Asp Ser Leu Gly Ser Asn His Ser Ile Pro Ser
            340                 345                 350
Met Ser Val Ser Thr Gly Ser Gln Ser Ser Ser Val Asn Ser Met Gln
        355                 360                 365
Glu Val Met Asp Glu Ser Ser Ser Glu Leu Val Met Met His Asp Asp
        370                 375                 380
Glu Ser Thr Ile Asn Ser Ser Ser Ser Val Val His Lys Lys Asp His
```

```
385                  390                  395                  400
Val Phe Ile Arg Asp Glu Ala Gly His Gly Asp Pro Arg Pro Glu Pro
            405        Val Gln Ser Gln    410              415
Arg Pro Thr Gln Ser     Gln Ala Leu His Tyr Arg Asn Arg
            420                  425                  430
Glu Arg Phe Ala Thr Ile Lys Ser Ala Ser Leu Val Thr Arg Gln Ile
        435              440                  445
His Glu His Glu Gln Glu Asn Glu Leu Arg Glu Gln Met Ser Gly Tyr
        450                  455                  460
Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Ile Ala Leu Glu Asn
465                  470                  475              480
Lys Leu Lys Ala Glu Met Asp Glu His Arg Leu Lys Leu Gln Lys Glu
            485                  490                  495
Val Glu Thr His Ala Asn Asn Ser Ser Ile Glu Leu Glu Lys Leu Ala
            500                  505                  510
Lys Lys Gln Val Ala Ile Ile Glu Lys Glu Ala Lys Val Ala Ala Ala
        515                  520                  525
Asp Glu Lys Lys Phe Gln Gln Gln Ile Leu Ala Gln Gln Lys Lys Asp
    530                  535                  540
Leu Thr Thr Phe Leu Glu Ser Gln Lys Lys Gln Tyr Lys Ile Cys Lys
545                  550                  555                  560
Glu Lys Ile Lys Glu Glu Met Asn Glu Asp His Ser Thr Pro Lys Lys
            565                  570                  575
Glu Lys Gln Glu Arg Ile Phe Lys His Lys Glu Asn Leu Gln His Thr
            580                  585                  590
Gln Ala Glu Glu Glu Ala His Leu Leu Thr Ser Thr Gly Asp Trp Thr
        595                  600                  605
Thr Thr Lys Asn Cys Arg Phe Phe Lys Arg Lys Ile Met Ile Lys Arg
    610                  615                  620
His Glu Val Glu Gln Gln Asn Ile Arg Glu Glu Leu Asn Lys Lys Arg
625                  630                  635                  640
Thr Met Lys Glu Met Glu His Ala Met Leu Ile Arg His Asp Glu Ser
            645                  650                  655
Thr Arg Glu Leu Glu Tyr Arg Gln Leu His Thr Leu Gln Lys Leu Arg
            660                  665                  670
Met Asp Leu Ile Arg Leu Gln His Gln Thr Glu Leu Glu Asn Gln Leu
            675                  680                  685
Glu Tyr Asn Lys Arg Arg Glu Arg Glu Leu His Arg Lys His Val Met
        690                  695                  700
Glu Leu Arg Gln Gln Pro Lys Asn Leu Lys Ala Met Glu Met Gln Ile
705                  710                  715                  720
Lys Lys Gln Phe Gln Asp Thr Cys Lys Val Gln Thr Lys Gln Tyr Lys
            725                  730                  735
Ala Leu Lys Asn His Gln Leu Glu Val Thr Pro Lys Asn Glu His Lys
            740                  745                  750
Thr Ile Leu Lys Thr Leu Lys Asp Glu Gln Thr Arg Lys Leu Ala Ile
        755                  760                  765
Leu Ala Glu Gln Tyr Glu Gln Ser Ile Asn Glu Met Met Ala Ser Gln
    770                  775                  780
Ala Leu Arg Leu Asp Glu Ala Gln Glu Ala Glu Cys Gln Ala Leu Arg
785                  790                  795                  800
Leu Gln Leu Gln Gln Glu Met Glu Leu Leu Asn Ala Tyr Gln Ser Lys
                805                  810                  815
Ile Lys Met Gln Thr Glu Ala Gln His Glu Arg Glu Leu Gln Lys Leu
```

```
                 820                    825                    830
Glu Gln Arg Val Ser Leu Arg Arg Ala His Leu Glu Gln Lys Ile Glu
            835                    840                    845
Glu Glu Leu Ala Ala Leu Gln Lys Glu Arg Ser Glu Arg Ile Lys Asn
        850                    855                    860
Leu Leu Glu Arg Gln Glu Arg Glu Ile Glu Thr Phe Asp Met Glu Ser
865                    870                    875                    880
Leu Arg Met Gly Phe Gly Asn Leu Val Thr Leu Asp Phe Pro Lys Glu
                    885                    890                    895
Asp Tyr Arg
```

```
<210> 5911
<211> 645
<212> DNA
<213> Homo sapiens


<400> 5911
nnaagtactt aagatggaaa gccagaaatc ccggtcttgt gcttcgctca cgctgggagc
60
tgtagaccgg agctgttcct attcggcaat cttggctctt ccgcagagga tctcattttg
120
cccgacggtg gtactccagc aggtacttca agtccagctt cttcatcttc ccttctcaac
180
agacttcagc ttgatgatga tattgatggt gagactagag atctcttcgt tatagtcgat
240
gatcccaaga agcatgtgtg tacaatggag acttacatca cctataggat caccaccaaa
300
agtactcggg tggagtttga cctgccagaa tattctgttc gtcgaagata ccaggatttt
360
gactggttga ggagcaaact ggaagaatcc cagcccactc atctcattcc ccctcttccc
420
gagaagtttg tggtaaaagg tgttgtggat cgtttttcag aagagtttgt ggagaccaga
480
agaaaagctt tggataaatt tctaaaaaga attacggacc atcctgtgct gtctttcaat
540
gaacacttta atattttcct tactgctaag gacctgaacg cctacaagaa gcaagggata
600
gcattgctga ccagaatggg cgagtcagtc aagcacgtca cgcgt
645
```

```
<210> 5912
<211> 211
<212> PRT
<213> Homo sapiens


<400> 5912
Asp Gly Lys Pro Glu Ile Pro Val Leu Cys Phe Ala His Ala Gly Ser
 1               5                    10                   15
Cys Arg Pro Glu Leu Phe Leu Phe Gly Asn Leu Gly Ser Ser Ala Glu
            20                   25                   30
Asp Leu Ile Leu Pro Asp Gly Gly Thr Pro Ala Gly Thr Ser Ser Pro
        35                   40                   45
Ala Ser Ser Ser Ser Leu Leu Asn Arg Leu Gln Leu Asp Asp Asp Ile
```

```
      50                    55                    60
Asp Gly Glu Thr Arg Asp Leu Phe Val Ile Val Asp Asp Pro Lys Lys
65                    70                    75                    80
His Val Cys Thr Met Glu Thr Tyr Ile Thr Tyr Arg Ile Thr Thr Lys
                85                    90                    95
Ser Thr Arg Val Glu Phe Asp Leu Pro Glu Tyr Ser Val Arg Arg Arg
                100                   105                   110
Tyr Gln Asp Phe Asp Trp Leu Arg Ser Lys Leu Glu Glu Ser Gln Pro
            115                   120                   125
Thr His Leu Ile Pro Pro Leu Pro Glu Lys Phe Val Val Lys Gly Val
        130                   135                   140
Val Asp Arg Phe Ser Glu Glu Phe Val Glu Thr Arg Arg Lys Ala Leu
145                   150                   155                   160
Asp Lys Phe Leu Lys Arg Ile Thr Asp His Pro Val Leu Ser Phe Asn
                165                   170                   175
Glu His Phe Asn Ile Phe Leu Thr Ala Lys Asp Leu Asn Ala Tyr Lys
                180                   185                   190
Lys Gln Gly Ile Ala Leu Leu Thr Arg Met Gly Glu Ser Val Lys His
        195                   200                   205
Val Thr Arg
    210
```

```
<210> 5913
<211> 2495
<212> DNA
<213> Homo sapiens
```

```
<400> 5913
attttttttt tttttttttt tttttttttt tttttttttt ttttttaatct tctcttcctc
60
cattttatag ggagaaaacc aagccactgg ccccgttaca cagcaagtta gtagtaagac
120
tgagattcga accctggtca aacagacttt ccattttgtt ccactgactc agtcttctct
180
tttacacttg aatcagactt ttagttttat tgtagttttt gagtccatag ctgtcttcct
240
gtactgtctt gactctttga ctaaactgat ttcacatctt taaaattatg ctttcctttt
300
aggctcattt ttagctcagc tgttgacagc tattttaaa tgtaacatga cataatatat
360
ttcctaaata atttaaaata atctagcttg agctgctctg aaggttagtc agttggtggt
420
gtgcatagag gtagagcctt cccccactct caaggatgct gtgaggggta ttcctaccat
480
gtggtgagtt gggaggtttt cctgaggtcc ttttccatcc tgagactctg gttttccatt
540
ttgtttctca caggccaggg ctttgaccga cacttgtttg ctctgcggca tctggcagca
600
gcanaaggga tcatcttgcc tgagctctac ctggaccctg catacgggca gataaaccac
660
aatgtcctgt ccacgagcac actgagcagc ccagcagtga accnttgtag gtttgcccct
720
gtggtctctg atgctttttgg tgttgggtat gctgttcatg acaactggat aggctgcaat
780
```

```
gtctcttcct acccaggccg caatgcccgg gagtttctcc aatgtgtgga gaaggctnta
840
gaagacatgt ttgatgcctt agaaggcaaa tccatcaaaa gttaacttct gggcagatga
900
aaagctacca tcacttcctc atcatgaaaa ctgggaggcc gggcatggtg gctcatgcct
960
gtaatcccag cattttgaga ggctgaggcg ggtggatcac ttgaggtcag gagtttgaga
1020
ccaacctggc caacatggtg aaaccttgtc tctactaaaa atacaaaaat tagctgggtg
1080
tggtggcatg tgcctataat cccagctact tgggaggttg aagcagaatt gcttgaaccc
1140
aggaggtgga ggttgcagtg agctgagatc acaccactgc actccggcct gggcgacaga
1200
gcgagactgt ctcaaaaaaa caaaaagaa aaaaaactg gggcctgtgt agccagtggg
1260
tgctattctg tgaaactaat cataagctgc ctaggcagcc agctacaggc ttgagcttta
1320
aattcatggt tttaaagcta aacgtaattt ccacttggga ctagatcaca actgaagata
1380
acaagagatt taagttttaa gggcatttaa tcaggaggaa aggtttggaa aactaactca
1440
ggtgtattta ttgtttaagc agaaataaag tttaattttt gcttgaagat ggttcctaat
1500
ttctttttaac ctaattccta atcctcacaa agatctttcc aacagcaagt tcagtaagtt
1560
caggtaacag tacgtcacca ttggcttctg gctcattgag tgatggtggg atcgcggttt
1620
catctctgta aacttgccct tgactgggga gataccatct ccttaaaaat actcttcatt
1680
ttcctaagga gtgaactgct gctgcacgaa ttcttatttg tggagggagt agctgcctcc
1740
ttacttcacc ttcatgcacc agtgcagcgt gaacaggggc tttattgatg gggcttggga
1800
agctgtaata aagtccagca tgcagattgt gaaggtttcg tatagccacc aggagacaag
1860
ggtcaaagga acgagcctct gtgggctctg ctgcttagag tactttgtcc tttctcagtt
1920
cttaagggca actgggaagg aagagggatc agcacttcac aaactggtgg gtgacctcat
1980
agattcccac agactcctgg gcctttttcat catagtcagt ccagtccttc tcctgcagat
2040
taatgtcact gaaggctgtc cctgactcca caccttcagc agcaaaccca gcctgcggct
2100
ggaaatcaac tggttcaagg ccccggcact caaactccac tattgtcttg aagttctcat
2160
tgtcttcagc attgtaaggc ttgatggtgc tgcttaaaat ctcgatggaa ttttctcttg
2220
cacacagctt gcacttctgg accatggaag cactgccacg gcccccttc agtgccacac
2280
tgtccatcag ccggatgtac tgccacttgt ccgaaatctc accacagttg ccacatttca
2340
tcttcaggta ccaccggaag tcctcgccca cgggccggag gttggtgatg ttctccagcg
2400
```

```
tggctttgag ttgcagcgcg attttcccca tggtagccct ctccgcccgg tgctggctgc
2460
ggcccttgcc gttgctttcc ggcgcgtcgt aaaag
2495
```

<210> 5914
<211> 158
<212> PRT
<213> Homo sapiens

<400> 5914
```
Ser Val Gly Gly Val His Arg Gly Arg Ala Phe Pro His Ser Gln Gly
1               5                   10                  15
Cys Cys Glu Gly Tyr Ser Tyr His Val Val Ser Trp Glu Val Phe Leu
            20                  25                  30
Arg Ser Phe Ser Ile Leu Arg Leu Trp Phe Ser Ile Leu Phe Leu Thr
        35                  40                  45
Gly Gln Gly Phe Asp Arg His Leu Phe Ala Leu Arg His Leu Ala Ala
    50                  55                  60
Ala Xaa Gly Ile Ile Leu Pro Glu Leu Tyr Leu Asp Pro Ala Tyr Gly
65                  70                  75                  80
Gln Ile Asn His Asn Val Leu Ser Thr Ser Thr Leu Ser Ser Pro Ala
                85                  90                  95
Val Asn Xaa Cys Arg Phe Ala Pro Val Val Ser Asp Ala Phe Gly Val
            100                 105                 110
Gly Tyr Ala Val His Asp Asn Trp Ile Gly Cys Asn Val Ser Ser Tyr
        115                 120                 125
Pro Gly Arg Asn Ala Arg Glu Phe Leu Gln Cys Val Glu Lys Ala Xaa
    130                 135                 140
Glu Asp Met Phe Asp Ala Leu Glu Gly Lys Ser Ile Lys Ser
145                 150                 155
```

<210> 5915
<211> 457
<212> DNA
<213> Homo sapiens

<400> 5915
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taccgaagac tcagcaactc cagcctctgt agcattgaag aagagcaccg aatggtgtat
60
gaaatggtac agcggattct cttgtcaaca cgaggttatg tcaacttcgt gaatgaagta
120
tttcaccagg catttttgtt gccttcctgt gagatagctg taacaagaaa agtagttcaa
180
gtgtacagaa agtggattct ccaggacaaa cctgtgttca tggaggagcc agatagaaaa
240
gatgttgccc aagaagatgc tgaaaaatta ggattttccg agactgatag caaggaggcc
300
tcatctgaaa gttctggtca taaacgatct tccagttggg gacgcacata ctccttcaca
360
agtgcaatga gcagagggtg tgtgacagag gaggaaaata caaatgtgaa agccggcgtc
420
caggctttgt tgcaggtatt tttggcgaac tctgcag
457
```

<210> 5916
<211> 152
<212> PRT
<213> Homo sapiens

<400> 5916
Tyr Arg Arg Leu Ser Asn Ser Ser Leu Cys Ser Ile Glu Glu Glu His
 1   5   10   15
Arg Met Val Tyr Glu Met Val Gln Arg Ile Leu Leu Ser Thr Arg Gly
                20   25   30
Tyr Val Asn Phe Val Asn Glu Val Phe His Gln Ala Phe Leu Leu Pro
            35   40   45
Ser Cys Glu Ile Ala Val Thr Arg Lys Val Val Gln Val Tyr Arg Lys
        50   55   60
Trp Ile Leu Gln Asp Lys Pro Val Phe Met Glu Glu Pro Asp Arg Lys
 65   70   75   80
Asp Val Ala Gln Glu Asp Ala Glu Lys Leu Gly Phe Ser Glu Thr Asp
                85   90   95
Ser Lys Glu Ala Ser Ser Glu Ser Ser Gly His Lys Arg Ser Ser Ser
            100   105   110
Trp Gly Arg Thr Tyr Ser Phe Thr Ser Ala Met Ser Arg Gly Cys Val
        115   120   125
Thr Glu Glu Glu Asn Thr Asn Val Lys Ala Gly Val Gln Ala Leu Leu
    130   135   140
Gln Val Phe Leu Ala Asn Ser Ala
145   150

<210> 5917
<211> 3727
<212> DNA
<213> Homo sapiens

<400> 5917
gcttgcggcc gcgtgacggt ggcgcacaag aaggctccgc cggccctgat cgacgagtgc
60
atcgagaagt tcaatcacgt cagcggcagc cggggtccg agagcccccg ccccaacccg
120
ccccatgccg cgcgccacag ggagccagga cctgtgcgca ggcccatgcg caagtccttc
180
tcccagcccg gcctgcgctc gctggccttt aggaaggagc tgcaggatgg gggcctccga
240
agcagcggct tcttcagctc cttcgaggag agcgacattg agaaccacct cattagcgga
300
cacaatattg tgcagcccac agatatcgag gaaaatcgaa ctatgctctt cacgattggc
360
cagtctgaag tttacctcat cagtcctgac accaaaaaaa tagcattgga gaaaaatttt
420
aaggagatat ccttttgctc tcagggcatc agacacgtgg accactttgg gtttatctgt
480
cgggagtctt ccggaggtgg cggctttcat tttgtctgtt acgtgtttca gtgcacaaat
540
gaggctctgg ttgatgaaat tatgatgacc ctgaaacagg ccttcacggt ggccgcagtg
600

```
cagcagacag ctaaggcgcc agcccagctg tgtgagggct gccccctgca aagcctgcac
660
aagctctgtg agaggataga gggaatgaat tcttccaaaa caaaactaga actgcaaaag
720
cacctgacga cattaaccaa tcaggagcag gcgactattt ttgaagaggt tcagaaattg
780
agaccgagaa atgagcagcg agagaatgaa ttgattattt cttttctgag atgtttatat
840
gaagagaaac agaaagaaca catccatatt ggggagatga agcagacatc gcagatggca
900
gcagagaata ttggaagtga attaccaccc agtgccactc gatttaggct agatatgctg
960
aaaaacaaag caaagagatc tttaacagag tctttagaaa gtattttgtc ccggggtaat
1020
aaagccagag gcctgcagga acactccatc agtgtggatc tggatagctc cctgtctagt
1080
acattaagta acaccagcaa agagccatct gtgtgtgaaa aggaggcctt gcccatctct
1140
gagagctcct ttaagctcct cggctcctcg gaggacctgt ccagtgactc ggagagtcat
1200
ctcccagaag agccagctcc gctgtcgccc cagcaggcct tcaggaggcg agcaaacacc
1260
ctgagtcact tccccatcga atgccaggaa cctccacaac ctgcccgggg gtccccgggg
1320
gtttcgcaaa ggaaacttat gaggtatcac tcagtgagca cagagacgcc tcatgaacga
1380
aaggactttg aatccaaagc aaaccatctt ggtgattctg gtgggactcc tgtgaagacc
1440
cggaggcatt cctggaggca gcagatattc ctccgagtag ccaccccgca gaaggcgtgc
1500
gattcttcca gcagatatga agattattca gagctgggag agcttccccc acgatctcct
1560
ttagaaccag tttgtgaaga tgggcccttt ggcccccacc agaggaaaag aaaaggacat
1620
ctcgtgagct ccgagagctg tggcaaaggg ctattcttca acagatactg cntgcttaga
1680
atggagaagg aaaatcagaa gctccaagcc tctgaaaatg atttgctgaa caagcgcctg
1740
aagctcgatt atgaagaaat tactccctgt cttaaagaag taactacagt gtgggaaaag
1800
atgcttagca ctccaggaag atcaaaaatt aagtttgaca tggaaaaaat gcactcggct
1860
gttgggcaag tgtgccacg tcatcaccga ggtgaaatct ggaaatttct agctgagcaa
1920
ttccacctta aacaccagtt tcccagcaaa cagcagccaa aggatgtgcc atacaaagaa
1980
ctcttaaagc agctgacttc ccagcagcat gcgattctta ttgaccttgg gcgaaccttt
2040
cctacacacc catacttctc tgcccagctt ggagcaggac agctatcgct ttacaacatt
2100
ttgaaggcct actcacttct agaccaggaa gtgggatatt gccaaggtct cagctttgta
2160
gcaggcattt tgcttcttca tatgagtgag gaagaggcgt ttaaaatgct caagtttctg
2220
```

```
atgtttgaca tggggctgcg gaaacagtat cggccagaca tgattatttt acagatccag
2280
atgtaccagc tctcgaggtt gcttcatgat taccacagag acctctacaa tcacctggag
2340
gagcacgaga tcggccccag cctctacgct gccccctggt tcctcaccat gtttgcctca
2400
cagttcccgc tgggattcgt agccagagtc tttgatatga ttttcttca gggaacagag
2460
gtcatattta aagtggcttt aagtctgttg ggaagccata agcccttgat tctgcagcat
2520
gaaaacctag aaaccatagt tgactttata aaaagcacgc tacccaacct tggcttggta
2580
cagatggaaa agaccatcaa tcaggtattt gaaatggaca tcgctaaaca gttacaagct
2640
tatgaagttg agtaccacgt ccttcaagaa gaacttatcg attcctctcc tctcagtgac
2700
aaccaaagaa tggataaatt agagaaaacc aacagcagct tacgcaaaca gaaccttgac
2760
ctccttgaac agttgcaggt ggcaaatggt aggatccaaa gccttgaggc caccattgag
2820
aagctcctga gcagtgagag caagctgaag caggccatgc ttaccttaga actggagcgg
2880
tcgcctgctg cagacggtgg aggagctgcg gcggcggagc gcagagccca gcgaccggga
2940
gcctgagtgc acgcagcccg agcccacggg cgactgacag cttgcaggag agattgcaac
3000
accatcacac tgtccaggcc ttaactgaga gggacagaag acgctggaag gagagaagga
3060
agcgggaagt gtgcttctca gggaggaaac cggcttgcca gcaagtagat tcttacgaac
3120
tccaacttgc aattcagggg gcatgtccca gtgttttttt tgttgttttt agatactaaa
3180
tcgtcccttc tccagtcctg attactgtac acagtagctt tagatggcgt ggacgtgaat
3240
aaatgcaact tatgttttct tgttggttcc tttttgagtg tcactgtgtt tgtaaagagc
3300
attcacaata cggtggaatt tcaaaagctg gaagagctcg agatcatgcc tcaggcaaag
3360
gcgtgggtcc atcgttcttc cgagagggtt tgtgtggcga ctacaccctc agcgtccctg
3420
gcaaggtgca gttggctctc gcccattctt gttatggaaa cctaagatga tcattgggaa
3480
gatcagtgat cttgggtcat tgatccctgg ctcagaggat agcggtttcc atcataaacc
3540
aagatgatga gttcagcctt tatccctcgt ggttccacta gatgtaactt aaaggagtta
3600
acatttgagg actttgttct acatcagatt ttactatttg aatgtttaag atcactttat
3660
tgaatttgaa gatcatcaaa ttaaataaaa tgatttattt aatttggata tcctgaaaaa
3720
aaaaaaa
3727
```

```
<210> 5918
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<211> 981
<212> PRT
<213> Homo sapiens

<400> 5918
Ala Cys Gly Arg Val Thr Val Ala His Lys Lys Ala Pro Pro Ala Leu
 1   5   10   15
Ile Asp Glu Cys Ile Glu Lys Phe Asn His Val Ser Gly Ser Arg Gly
            20   25   30
Ser Glu Ser Pro Arg Pro Asn Pro Pro His Ala Ala Arg His Arg Glu
        35   40   45
Pro Gly Pro Val Arg Arg Pro Met Arg Lys Ser Phe Ser Gln Pro Gly
    50   55   60
Leu Arg Ser Leu Ala Phe Arg Lys Glu Leu Gln Asp Gly Gly Leu Arg
65   70   75   80
Ser Ser Gly Phe Phe Ser Ser Phe Glu Glu Ser Asp Ile Glu Asn His
                85   90   95
Leu Ile Ser Gly His Asn Ile Val Gln Pro Thr Asp Ile Glu Glu Asn
            100   105   110
Arg Thr Met Leu Phe Thr Ile Gly Gln Ser Glu Val Tyr Leu Ile Ser
            115   120   125
Pro Asp Thr Lys Lys Ile Ala Leu Glu Lys Asn Phe Lys Glu Ile Ser
    130   135   140
Phe Cys Ser Gln Gly Ile Arg His Val Asp His Phe Gly Phe Ile Cys
145   150   155   160
Arg Glu Ser Ser Gly Gly Gly Gly Phe His Phe Val Cys Tyr Val Phe
                165   170   175
Gln Cys Thr Asn Glu Ala Leu Val Asp Glu Ile Met Met Thr Leu Lys
            180   185   190
Gln Ala Phe Thr Val Ala Ala Val Gln Gln Thr Ala Lys Ala Pro Ala
            195   200   205
Gln Leu Cys Glu Gly Cys Pro Leu Gln Ser Leu His Lys Leu Cys Glu
    210   215   220
Arg Ile Glu Gly Met Asn Ser Ser Lys Thr Lys Leu Glu Leu Gln Lys
225   230   235   240
His Leu Thr Thr Leu Thr Asn Gln Glu Gln Ala Thr Ile Phe Glu Glu
                245   250   255
Val Gln Lys Leu Arg Pro Arg Asn Glu Gln Arg Glu Asn Glu Leu Ile
            260   265   270
Ile Ser Phe Leu Arg Cys Leu Tyr Glu Glu Lys Gln Lys Glu His Ile
            275   280   285
His Ile Gly Glu Met Lys Gln Thr Ser Gln Met Ala Ala Glu Asn Ile
    290   295   300
Gly Ser Glu Leu Pro Pro Ser Ala Thr Arg Phe Arg Leu Asp Met Leu
305   310   315   320
Lys Asn Lys Ala Lys Arg Ser Leu Thr Glu Ser Leu Glu Ser Ile Leu
                325   330   335
Ser Arg Gly Asn Lys Ala Arg Gly Leu Gln Glu His Ser Ile Ser Val
                340   345   350
Asp Leu Asp Ser Ser Leu Ser Ser Thr Leu Ser Asn Thr Ser Lys Glu
            355   360   365
Pro Ser Val Cys Glu Lys Glu Ala Leu Pro Ile Ser Glu Ser Ser Phe
    370   375   380
Lys Leu Leu Gly Ser Ser Glu Asp Leu Ser Ser Asp Ser Glu Ser His

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385                390                395                400
Leu Pro Glu Glu Pro Ala Pro Leu Ser Pro Gln Gln Ala Phe Arg Arg
            405                410                415
Arg Ala Asn Thr Leu Ser His Phe Pro Ile Glu Cys Gln Glu Pro Pro
            420                425                430
Gln Pro Ala Arg Gly Ser Pro Gly Val Ser Gln Arg Lys Leu Met Arg
            435                440                445
Tyr His Ser Val Ser Thr Glu Thr Pro His Glu Arg Lys Asp Phe Glu
    450                455                460
Ser Lys Ala Asn His Leu Gly Asp Ser Gly Gly Thr Pro Val Lys Thr
465                470                475                480
Arg Arg His Ser Trp Arg Gln Gln Ile Phe Leu Arg Val Ala Thr Pro
            485                490                495
Gln Lys Ala Cys Asp Ser Ser Ser Arg Tyr Glu Asp Tyr Ser Glu Leu
        500                505                510
Gly Glu Leu Pro Pro Arg Ser Pro Leu Glu Pro Val Cys Glu Asp Gly
        515                520                525
Pro Phe Gly Pro His Gln Arg Lys Arg Lys Gly His Leu Val Ser Ser
    530                535                540
Glu Ser Cys Gly Lys Gly Leu Phe Phe Asn Arg Tyr Cys Xaa Leu Arg
545                550                555                560
Met Glu Lys Glu Asn Gln Lys Leu Gln Ala Ser Glu Asn Asp Leu Leu
            565                570                575
Asn Lys Arg Leu Lys Leu Asp Tyr Glu Glu Ile Thr Pro Cys Leu Lys
            580                585                590
Glu Val Thr Thr Val Trp Glu Lys Met Leu Ser Thr Pro Gly Arg Ser
        595                600                605
Lys Ile Lys Phe Asp Met Glu Lys Met His Ser Ala Val Gly Gln Gly
    610                615                620
Val Pro Arg His His Arg Gly Glu Ile Trp Lys Phe Leu Ala Glu Gln
625                630                635                640
Phe His Leu Lys His Gln Phe Pro Ser Lys Gln Gln Pro Lys Asp Val
            645                650                655
Pro Tyr Lys Glu Leu Leu Lys Gln Leu Thr Ser Gln Gln His Ala Ile
            660                665                670
Leu Ile Asp Leu Gly Arg Thr Phe Pro Thr His Pro Tyr Phe Ser Ala
        675                680                685
Gln Leu Gly Ala Gly Gln Leu Ser Leu Tyr Asn Ile Leu Lys Ala Tyr
        690                695                700
Ser Leu Leu Asp Gln Glu Val Gly Tyr Cys Gln Gly Leu Ser Phe Val
705                710                715                720
Ala Gly Ile Leu Leu Leu His Met Ser Glu Glu Glu Ala Phe Lys Met
            725                730                735
Leu Lys Phe Leu Met Phe Asp Met Gly Leu Arg Lys Gln Tyr Arg Pro
            740                745                750
Asp Met Ile Ile Leu Gln Ile Gln Met Tyr Gln Leu Ser Arg Leu Leu
            755                760                765
His Asp Tyr His Arg Asp Leu Tyr Asn His Leu Glu Glu His Glu Ile
    770                775                780
Gly Pro Ser Leu Tyr Ala Ala Pro Trp Phe Leu Thr Met Phe Ala Ser
785                790                795                800
Gln Phe Pro Leu Gly Phe Val Ala Arg Val Phe Asp Met Ile Phe Leu
            805                810                815
Gln Gly Thr Glu Val Ile Phe Lys Val Ala Leu Ser Leu Leu Gly Ser
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                   820                   825                   830
     His Lys Pro Leu Ile Leu Gln His Glu Asn Leu Glu Thr Ile Val Asp
              835                   840                   845
     Phe Ile Lys Ser Thr Leu Pro Asn Leu Gly Leu Val Gln Met Glu Lys
         850                   855                   860
     Thr Ile Asn Gln Val Phe Glu Met Asp Ile Ala Lys Gln Leu Gln Ala
     865                   870                   875                   880
     Tyr Glu Val Glu Tyr His Val Leu Gln Glu Glu Leu Ile Asp Ser Ser
                   885                   890                   895
     Pro Leu Ser Asp Asn Gln Arg Met Asp Lys Leu Glu Lys Thr Asn Ser
                   900                   905                   910
     Ser Leu Arg Lys Gln Asn Leu Asp Leu Leu Glu Gln Leu Gln Val Ala
              915                   920                   925
     Asn Gly Arg Ile Gln Ser Leu Glu Ala Thr Ile Glu Lys Leu Leu Ser
              930                   935                   940
     Ser Glu Ser Lys Leu Lys Gln Ala Met Leu Thr Leu Glu Leu Glu Arg
     945                   950                   955                   960
     Ser Pro Ala Ala Asp Gly Gly Gly Ala Ala Ala Ala Glu Arg Arg Ala
                   965                   970                   975
     Gln Arg Pro Gly Ala
                   980
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<210> 5919
<211> 1320
<212> DNA
<213> Homo sapiens

<400> 5919
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120
cttctcaagg agaagtgcct tttcacggta cagcaagtca ccaagatttt gcacagttgc
180
ccctctgttc ttcgagagga cctgggtcaa ctggaataca gtttcagca gcctcgtctt
240
acagcgtgac tgcaaagaaa aagacttttg ttttgcaaaa gaaaagcagc tcggtgactc
300
cgtccacatc gccacagttg agtcagatgg cagtggcagt cctttgccag tggaaggagt
360
tcctgctaag gggaggtgca ggaggactaa tttattattg tgcaactgcc agtcctgcgc
420
attccagcta cgctaagcgc cctgcccagg cacgtaacaa acatagacc tgttttgaag
480
tggcttgtta cccaagggtg cctcactcat ctgcgccacc aggaagatga actgtgaggg
540
ctcctataag gggcaggaag agcaaagctg tcctaggcca accagagatt catctttcat
600
gcagtgacat gttgataaaa aatgatggtc agtatgaaac tggtaacagg ttgtagatgg
660
ctttctatgg tatatcccag tctcttgcaa acgattgtga agaatgccag tgttgtttaa
720
gattcggcag tttgtgtggg gaggtggggg caggatgggg tttggttgcc aaaagagttt
780
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gggaaatgct ggcttaaaca aaggcgagag gaagttcctt tcacgtcagg atttatgaat
840

gcctatgagc ccagtgtcag tgacgacttt ctagcggcgg tcttcaacac tttctaaata
900

ttaagcgatc aaggcccctg ccccactttt agttccaaca gaatgccgtt cacaagatct
960

gggaggcact ctctcagccc tctcctggag cccccggaat ttctcagcag cccaggccct
1020

cccgctgccc gtggcccctc ctcccaggtg ccaggtggtc ttccagcctc tccaagggcc
1080

cacccccctg cctcttcctc ccactgcagc tgatctaggg gtttcttggc cacatttccc
1140

ttgagagaga gtgggatttg ccctatccac agagagcctc atttccacct gaaggtgtat
1200

ttgtcagtgg ctagaccagg ttcatgtctg tttccccttg gggacttctg aaccttcctg
1260

cccgggagtc tgtaaacagc agcacaggac cgcgcttcct ttagcagtgc tgagtaagca
1320

<210> 5920
<211> 93
<212> PRT
<213> Homo sapiens

<400> 5920
Met Arg Leu Ser Val Asp Arg Ala Asn Pro Thr Leu Ser Gln Gly Lys
 1   5   10   15
Cys Gly Gln Glu Thr Pro Arg Ser Ala Ala Val Gly Gly Arg Gly Arg
             20   25   30
Gly Val Gly Pro Trp Arg Gly Trp Lys Thr Thr Trp His Leu Gly Gly
         35   40   45
Gly Ala Thr Gly Ser Gly Arg Ala Trp Ala Ala Glu Lys Phe Arg Gly
     50   55   60
Leu Gln Glu Arg Ala Glu Arg Val Pro Pro Arg Ser Cys Glu Arg His
65   70   75   80
Ser Val Gly Thr Lys Ser Gly Ala Gly Ala Leu Ile Ala
                 85   90

<210> 5921
<211> 4130
<212> DNA
<213> Homo sapiens

<400> 5921
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60

aaggatggca agcgctttgc ttctggatca gctgacaaaa gcgttattat ctggacatca
120

aaactggaag gcattctgaa gtacacgcac aatgatgcta tacaatgtgt ctcctacaat
180

cctattactc atcaactggc atcttgttcc tccagtgact ttgggttgtg gtctcctgaa
240

cagaagtctg tctccaaaca caaatcaagc agcaagatca tctgctgcag ctggacaaat
300

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gatggtcagt acctggcgct ggggatgttc aatgggatca tcagcatacg gaacaaaaat
360
ggcgaggaga aagtaaagat cgagcggccg gggggctccc tctcgccaat atggtccatc
420
tgctggaacc cttcaagccg atgggagagt ttctggatga acagagagaa tgaggatgcc
480
gaggatgtca ttgtcaacag atatattcag gaaatccctt ccactctgaa gtcagcagtg
540
tacagtagtc agggtagtga ggcagaggag gaagaaccag aggaagagga cgacagtccc
600
agggacgaca acttagagga acgtaatgac atcctggctg tggctgactg gggacagaaa
660
gtttccttct accagctgag tggaaaacag attggaaagg atcgggcact gaactttgac
720
ccctgctgca tcagctactt tactaaaggc gagtacattt tgctggggggg ttcagacaag
780
caagtttctc ttttcaccaa ggatggagtg cggcttggga ctgttgggga gcagaactcc
840
tgggtgtgga cgtgtcaagc gaaaccggat tccaactatg tggtggtcgg ctgccaggac
900
ggcaccattt ccttctacca gcttattttc agcacagtcc atgggcttta caaggaccgc
960
tatgcctaca gggatagcat gactgacgtc attgtgcagc acctgatcac tgagcagaaa
1020
gttcggatta aatgcaaaga gcttgtcaag aagattgcca tctacagaaa tcgattggct
1080
atccaactgc cagagaaaat cctcatctat gagttgtatt cagaggactt atcagacatg
1140
cattaccggg taaaggagaa gattatcaag aagtttgagt gcaacctcct ggtggtgtgt
1200
gccaatcaca tcatcctgtg ccaggagaaa cggctgcagt gcctgtcctt cagcggagtg
1260
aaggagcggg agtggcagat ggagtctctc attcgttaca tcaaggtgat cggtggccct
1320
cctggaagag aaggcctctt agtggggctg aagaatggac agatcctgaa gatcttcgtg
1380
gacaatctct ttgctatcgt cctgctgaag caggccacag ctgtgcgctg cttggacatg
1440
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1500
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1560
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1620
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1740
cagtacctgg ataggaaact gttcaaggaa gcctaccaga ttgcttgctt gggtgtcaca
1800
gacactgatt ggcgtgaact ggccatggaa gcgctagaag gtttagattt tgaaacagca
1860
aagaaggcct tcatcagagt acaagacctc cgatatttag agctcatcag cagcattgag
1920
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gagaggaaga agcgggggaga gaccaacaat gacctgtttc tggcagatgt gttttcctac
1980
cagggggaagt tccatgaggc cgccaaactg tacaagagga gtgggcacga gaacctcgcg
2040
cttgaaatgt acaccgacct ctgcatgttt gagtatgcca aggatttcct tggatctgga
2100
gaccccaaag aaacaaagat gctaatcacc aaacaggctg actgggccag aaatatcaag
2160
gagcccaaag ccgccgtgga gatgtacatc tcagcaggag agcacgtcaa ggccatcgag
2220
atctgtggtg accatggctg ggttgacatg ttgatcgaca tcgcccgcaa actggacaag
2280
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2340
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2400
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2520
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2640
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2700
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2760
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2820
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2880
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2940
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3060
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3120
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3180
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3240
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3300
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3420
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3480
gcctccatta ccatgtgccc ctcctgcttc caggtaggtg gccaccctgg tagctcacat
3540
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gtgcttctct tggccacttt tcccttgccc aaatgtccct ctgggaggcg gggcccctgg
3600
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3660
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3720
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3780
accccacagc cccctcccat ctcccttcc agccctcaaa caaaggtgct gcaggtctgt
3840
gtccagccct gaccactgcc aagcccctc cccttgagag gcagtgcgtc ctggccccag
3900
gcgtagggct gatgagcact agggcttcag cctggtctta cagctgtctt cccttagatg
3960
ttccattctg aggactatga gttgctggtg cttcagcatg gctgctgccc ctactgccgc
4020
aggtgcaagg atgaccctgg cccatgacca gcatcctggg gacggcctgc accctctgcc
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cgccttgggg tctgctgggc tgtgaaggag aataaagagt taaactgtca
4130
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<210> 5922
<211> 1252
<212> PRT
<213> Homo sapiens

<400> 5922

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Val Ala Tyr Ala Lys Asp Gly Lys Arg Phe Ala Ser Gly Ser Ala Asp
            20                  25                  30
Lys Ser Val Ile Ile Trp Thr Ser Lys Leu Glu Gly Ile Leu Lys Tyr
        35                  40                  45
Thr His Asn Asp Ala Ile Gln Cys Val Ser Tyr Asn Pro Ile Thr His
    50                  55                  60
Gln Leu Ala Ser Cys Ser Ser Ser Asp Phe Gly Leu Trp Ser Pro Glu
65                  70                  75                  80
Gln Lys Ser Val Ser Lys His Lys Ser Ser Ser Lys Ile Ile Cys Cys
                85                  90                  95
Ser Trp Thr Asn Asp Gly Gln Tyr Leu Ala Leu Gly Met Phe Asn Gly
            100                 105                 110
Ile Ile Ser Ile Arg Asn Lys Asn Gly Glu Glu Lys Val Lys Ile Glu
        115                 120                 125
Arg Pro Gly Gly Ser Leu Ser Pro Ile Trp Ser Ile Cys Trp Asn Pro
    130                 135                 140
Ser Ser Arg Trp Glu Ser Phe Trp Met Asn Arg Glu Asn Glu Asp Ala
145                 150                 155                 160
Glu Asp Val Ile Val Asn Arg Tyr Ile Gln Glu Ile Pro Ser Thr Leu
                165                 170                 175
Lys Ser Ala Val Tyr Ser Ser Gln Gly Ser Glu Ala Glu Glu Glu Glu
            180                 185                 190
Pro Glu Glu Glu Asp Asp Ser Pro Arg Asp Asp Asn Leu Glu Glu Arg
        195                 200                 205
Asn Asp Ile Leu Ala Val Ala Asp Trp Gly Gln Lys Val Ser Phe Tyr
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          210                      215                      220
Gln Leu Ser Gly Lys Gln Ile Gly Lys Asp Arg Ala Leu Asn Phe Asp
225                      230                      235                      240
Pro Cys Cys Ile Ser Tyr Phe Thr Lys Gly Glu Tyr Ile Leu Leu Gly
                    245                      250                      255
Gly Ser Asp Lys Gln Val Ser Leu Phe Thr Lys Asp Gly Val Arg Leu
                260                      265                      270
Gly Thr Val Gly Glu Gln Asn Ser Trp Val Trp Thr Cys Gln Ala Lys
            275                      280                      285
Pro Asp Ser Asn Tyr Val Val Val Gly Cys Gln Asp Gly Thr Ile Ser
        290                      295                      300
Phe Tyr Gln Leu Ile Phe Ser Thr Val His Gly Leu Tyr Lys Asp Arg
305                      310                      315                      320
Tyr Ala Tyr Arg Asp Ser Met Thr Asp Val Ile Val Gln His Leu Ile
                325                      330                      335
Thr Glu Gln Lys Val Arg Ile Lys Cys Lys Glu Leu Val Lys Lys Ile
                340                      345                      350
Ala Ile Tyr Arg Asn Arg Leu Ala Ile Gln Leu Pro Glu Lys Ile Leu
            355                      360                      365
Ile Tyr Glu Leu Tyr Ser Glu Asp Leu Ser Asp Met His Tyr Arg Val
        370                      375                      380
Lys Glu Lys Ile Ile Lys Lys Phe Glu Cys Asn Leu Leu Val Val Cys
385                      390                      395                      400
Ala Asn His Ile Ile Leu Cys Gln Glu Lys Arg Leu Gln Cys Leu Ser
                405                      410                      415
Phe Ser Gly Val Lys Glu Arg Glu Trp Gln Met Glu Ser Leu Ile Arg
            420                      425                      430
Tyr Ile Lys Val Ile Gly Gly Pro Pro Gly Arg Glu Gly Leu Leu Val
        435                      440                      445
Gly Leu Lys Asn Gly Gln Ile Leu Lys Ile Phe Val Asp Asn Leu Phe
    450                      455                      460
Ala Ile Val Leu Leu Lys Gln Ala Thr Ala Val Arg Cys Leu Asp Met
465                      470                      475                      480
Ser Ala Ser Arg Lys Lys Leu Ala Val Val Asp Glu Asn Asp Thr Cys
                485                      490                      495
Leu Val Tyr Asp Ile Asp Thr Lys Glu Leu Leu Phe Gln Glu Pro Asn
                500                      505                      510
Ala Asn Ser Val Ala Trp Asn Thr Gln Cys Glu Asp Met Leu Cys Phe
        515                      520                      525
Ser Gly Gly Gly Tyr Leu Asn Ile Lys Ala Ser Thr Phe Pro Val His
    530                      535                      540
Arg Gln Lys Leu Gln Gly Phe Val Val Gly Tyr Asn Gly Ser Lys Ile
545                      550                      555                      560
Phe Cys Leu His Val Phe Ser Ile Ser Ala Val Glu Val Pro Gln Ser
                565                      570                      575
Ala Pro Met Tyr Gln Tyr Leu Asp Arg Lys Leu Phe Lys Glu Ala Tyr
                580                      585                      590
Gln Ile Ala Cys Leu Gly Val Thr Asp Thr Asp Trp Arg Glu Leu Ala
            595                      600                      605
Met Glu Ala Leu Glu Gly Leu Asp Phe Glu Thr Ala Lys Lys Ala Phe
        610                      615                      620
Ile Arg Val Gln Asp Leu Arg Tyr Leu Glu Leu Ile Ser Ser Ile Glu
625                      630                      635                      640
Glu Arg Lys Lys Arg Gly Glu Thr Asn Asn Asp Leu Phe Leu Ala Asp
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                        645                    650                    655
Val Phe Ser Tyr Gln Gly Lys Phe His Glu Ala Ala Lys Leu Tyr Lys
                660                    665                    670
Arg Ser Gly His Glu Asn Leu Ala Leu Glu Met Tyr Thr Asp Leu Cys
            675                    680                    685
Met Phe Glu Tyr Ala Lys Asp Phe Leu Gly Ser Gly Asp Pro Lys Glu
        690                    695                    700
Thr Lys Met Leu Ile Thr Lys Gln Ala Asp Trp Ala Arg Asn Ile Lys
705                    710                    715                    720
Glu Pro Lys Ala Ala Val Glu Met Tyr Ile Ser Ala Gly Glu His Val
                725                    730                    735
Lys Ala Ile Glu Ile Cys Gly Asp His Gly Trp Val Asp Met Leu Ile
            740                    745                    750
Asp Ile Ala Arg Lys Leu Asp Lys Ala Glu Arg Glu Pro Leu Leu Leu
            755                    760                    765
Cys Ala Thr Tyr Leu Lys Lys Leu Asp Ser Pro Gly Tyr Ala Ala Glu
        770                    775                    780
Thr Tyr Leu Lys Met Gly Asp Leu Lys Ser Leu Val Gln Leu His Val
785                    790                    795                    800
Glu Thr Gln Arg Trp Asp Glu Ala Phe Ala Leu Gly Glu Lys His Pro
                805                    810                    815
Glu Phe Lys Asp Asp Ile Tyr Met Pro Tyr Ala Gln Trp Leu Ala Glu
            820                    825                   830
Asn Asp Arg Phe Glu Glu Ala Gln Lys Ala Phe His Lys Ala Gly Arg
            835                    840                   845
Gln Arg Glu Ala Val Gln Val Leu Glu Gln Leu Thr Asn Asn Ala Val
        850                    855                    860
Ala Glu Ser Arg Phe Asn Asp Ala Ala Tyr Tyr Tyr Trp Met Leu Ser
865                    870                    875                    880
Met Gln Cys Leu Asp Ile Ala Gln Ala Asp Pro Ala Gln Lys Asp Thr
            885                    890                    895
Met Leu Gly Lys Phe Tyr His Phe Gln Arg Leu Ala Glu Leu Tyr His
        900                    905                    910
Gly Tyr His Ala Ile His Arg His Thr Glu Asp Pro Phe Ser Val His
        915                    920                    925
Arg Pro Glu Thr Leu Phe Asn Ile Ser Arg Phe Leu Leu His Ser Leu
        930                    935                    940
Pro Lys Asp Thr Pro Ser Gly Ile Ser Lys Val Lys Ile Leu Phe Thr
945                    950                    955                    960
Leu Ala Lys Gln Ser Lys Ala Leu Gly Ala Tyr Arg Leu Ala Arg His
            965                    970                    975
Ala Tyr Asp Lys Leu Arg Gly Leu Tyr Ile Pro Ala Arg Phe Gln Lys
            980                    985                    990
Ser Ile Glu Leu Gly Thr Leu Thr Ile Arg Ala Lys Pro Phe His Asp
        995                    1000                   1005
Ser Glu Glu Leu Val Pro Leu Cys Tyr Arg Cys Ser Thr Asn Asn Pro
    1010                   1015                   1020
Leu Leu Asn Asn Leu Gly Asn Val Cys Ile Asn Cys Arg Gln Pro Phe
1025                   1030                   1035                   1040
Ile Phe Ser Ala Ser Ser Tyr Asp Val Leu His Leu Val Glu Phe Tyr
            1045                   1050                   1055
Leu Glu Glu Gly Ile Thr Asp Glu Glu Ala Ile Ser Leu Ile Asp Leu
        1060                   1065                   1070
Glu Val Leu Arg Pro Lys Arg Asp Asp Arg Gln Leu Glu Ile Ala Asn
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         1075               1080               1085
Asn Ser Ser Gln Ile Leu Arg Leu Val Glu Thr Lys Asp Ser Ile Gly
     1090               1095               1100
Asp Glu Asp Pro Phe Thr Ala Lys Leu Ser Phe Glu Gln Gly Gly Ser
1105               1110               1115               1120
Glu Phe Val Pro Val Val Val Ser Arg Leu Val Leu Arg Ser Met Ser
              1125               1130               1135
Arg Arg Asp Val Leu Ile Lys Arg Trp Pro Pro Pro Leu Arg Trp Gln
          1140               1145               1150
Tyr Phe Arg Ser Leu Leu Pro Asp Ala Ser Ile Thr Met Cys Pro Ser
          1155               1160               1165
Cys Phe Gln Val Gly Gly His Pro Gly Ser Ser His Val Leu Leu Leu
     1170               1175               1180
Ala Thr Phe Pro Leu Pro Lys Cys Pro Ser Gly Arg Arg Gly Pro Trp
1185               1190               1195               1200
Glu Gly Gly Ala His Pro Trp Leu Gln Val Gly Thr Glu Ala Cys Leu
              1205               1210               1215
Ser Ser Pro Leu Leu Ala Phe His Val His Leu Lys Trp Thr Ser Leu
          1220               1225               1230
Ala Pro Ala Leu Ser Thr Ser Ser Pro Asn Pro Gly Gly Pro Ala Ser
       1235               1240               1245
Val Met Cys Pro
     1250


<210> 5923
<211> 1989
<212> DNA
<213> Homo sapiens


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120
agaactgtgc caaatcttcg ctgcctatgt gcggaaaact gccaggctga gagacaaagc
180
agacctcctg gtgaatgaaa ttaacgcgta tgctgctaca gagaccccgc atttaaagct
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300
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360
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420
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480
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540
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600
taacaacttt gaaaggcaga aaatgaagga tataaagact atattttctg aatttatcac
660
aatcgaaatg ttatttcacg gcaaagcttt agaggtctac actgctgcct accagaatat
720
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acaaaacatt gatgaagatg aagatttaga ggttttccga aattctctgt atgcaccaga
780
ttattcatct cgtttagata ttgtaagagc aaattcaaag tcacctcttc agagatcact
840
gtcagctaag tgtgtatctg gaacaggaca ggtatccact tgtcgactaa gaaaggatca
900
acaagcagaa gatgatgagg atgacgagtt agatgttaca gaagaagaaa attttcttaa
960
gtaaactaca catttccatt ttcatcataa atgacttgaa atccacaatg actaaattgt
1020
agaactttat actcactttg ctatgttaag cctcaaagtg aagtccaact ggaaacagaa
1080
aaataattaa aggaaactta tgctgaccaa aaatgaaggc tttaaaaaat attgcatacc
1140
agtcatttca acatcctacc tagtgttaca tgatttttgt gtaagtgcct ttttttttaa
1200
agatggtgta tttcaaagta tttcatatta atgtactata tctacttgaa gttccaatag
1260
tacattatga cagaaaccaa aagatctaac aattctgctt agctttttgg ttaagactcc
1320
atgctttcat taccagaaaa gggtcttacg tagtcattat gattcatgga attctattcc
1380
atgaagcctt aagaaaaaaa actttttta actttccctg aaactttatc atttgataag
1440
taaatttact tttcaagaag agtataacca aagagtaaag ataatgtgac actaagttat
1500
caatgtttta tgaatacaca taaggcataa atttcagctg taaaaaagct acattcaatc
1560
tgactctggt tttaaaacaa aactgctgtc ataattatac atgatactgc aacttttgga
1620
aggctaattt ggtggaatgt tgcctcatca tagaacacca tagatcatta aaaattctat
1680
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1740
aaaatataaa acattgagcc tttcagtgta tctgatgctt ctcttttggt aaggaatact
1800
tttatttcat ggatcccagg caggcatata aaagttacgg aatttataaa atcatttggg
1860
ataattagaa aatgcaatta ttcataacag aaaaataaag actttctaga aagcttctga
1920
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1980
acaaagttg
1989


<210> 5924
<211> 146
<212> PRT
<213> Homo sapiens

<400> 5924
Met Phe Lys Ala Glu Thr Glu Leu Gln Arg Ala Ala Met Asp Ala Ser
1               5                   10                  15
Arg Thr Ser Arg His Leu Glu Glu Thr Ile Asn Asn Phe Glu Arg Gln
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```
                    20                    25                    30
Lys Met Lys Asp Ile Lys Thr Ile Phe Ser Glu Phe Ile Thr Ile Glu
            35                    40                    45
Met Leu Phe His Gly Lys Ala Leu Glu Val Tyr Thr Ala Ala Tyr Gln
        50                    55                    60
Asn Ile Gln Asn Ile Asp Glu Asp Glu Asp Leu Glu Val Phe Arg Asn
65                    70                    75                    80
Ser Leu Tyr Ala Pro Asp Tyr Ser Ser Arg Leu Asp Ile Val Arg Ala
                85                    90                    95
Asn Ser Lys Ser Pro Leu Gln Arg Ser Leu Ser Ala Lys Cys Val Ser
               100                   105                   110
Gly Thr Gly Gln Val Ser Thr Cys Arg Leu Arg Lys Asp Gln Gln Ala
           115                   120                   125
Glu Asp Asp Glu Asp Asp Glu Leu Asp Val Thr Glu Glu Glu Asn Phe
       130                   135                   140
Leu Lys
145
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```
<210> 5925
<211> 4538
<212> DNA
<213> Homo sapiens

<400> 5925
gctagccagc tgtgtgaggg ccgttgcctt atctgagctc tgagttattt agtttttaat
60
ggaaacaaga cccccgcaga cacgcaggaa aacacaaatc cctatcagat cagcagccat
120
ggacgtggag acgtggcctt tgtccctctg tcccagcgcc cggcctgtgt agttggactt
180
ggcagtgtgc agcgctagaa aggaattgtc tgaccccagc attgcttcct ggctcctttc
240
ttcctttttc aggagagcat cctgccgacc acagccctcc ccactgtgag ccttcctgac
300
agcctcatcg cgccccctac cgccccatcc ctggctcaca tggatgagca gggctgtgaa
360
cacacctccc ggactgagga cccgtttatc cagcccacgg acttcggtcc ctcagagccg
420
ccactgagtg tcccgcagcc cttcctccct gtcttcacca tgcccctgct gtctcccagc
480
cccgccccac cgcccatctc ccccgtgtta ccattagttc ctcctcctgc cactgccctg
540
aacccccggg ctccacccac cttccatcag ccacagaagt ttgctggagt caacaaagcg
600
ccgtctgtca tcacccacac ggcctctgcc accctcaccc acgatgcccc cgccaccacc
660
tttagccaga gtcagggcct tgtgatcacc accatcaccc tgccccgtc agcggcccct
720
tgtgggctgg cactgtctcc tgtcacccgg cctccccagc acggttaac ttttgtgcac
780
cccaaacctg tatccttgac tggggggcagg cctaagcagc cccacaaaat agtgcctgct
840
cccaaaccag agcccgtgtc cttggtgttg aagaatgccc gtatcgcccc agctgccttt
900
```

```
tcaggccaac cacaagcggt gatcatgacg tcagggcctc tgaagagaga agggatgttg
960
gcctccaccg tgtcccagtc caacgtggtc attgcgcctg ctgccatcgc cagggctcct
1020
ggggtcccgg agttccacag cagcatcctg gtgacagatc tcggccatgg cacgagcagc
1080
ccgcctgccc ccgtctcccg gctcttccca agcacagcgc aagacccct ggggaagggc
1140
gagcaggtcc cgctgcatgg gggcagcccc caggtcactg tcacagggcc cagtcgggac
1200
tgcccaaact cagggcaggc ctctccgtgt gcatcggagc agagccccag tcctcaatct
1260
ccccagaaca actgctcagg gaaatccgac cccaaaaatg tggctgcact aaagaaccgg
1320
cagatgaagc acatctcagc tgagcagaaa aggcgcttca acatcaagat gtgcttcgac
1380
atgctcaaca gcctcatctc caacaattcc aagctgacca gtcacgccat cacactgcag
1440
aagactgtgg agtacatcac caagctgcag caggagagag gccagatgca ggaggaggcc
1500
cggcggctgc gggaggagat cgaggagctc aatgccacca tcatctcctg ccagcagctg
1560
ctccctgcca cgggagtccc cgttacccgg cgccagtttg atcacatgaa agacatgttt
1620
gacgaatacg tgaaaacccg gaccttgcag aattggaagt tctggatttt cagcatcatc
1680
atcaagccgc tgtttgagtc gttcaagggc atggtgtcca ccagcagcct ggaggagctg
1740
caccggacgg cgctctcctg gctggaccag cactgctccc tgcccatcct caggccgatg
1800
gtattgagca cgctgcggca gctgagcacc tccacctcca tcctcacaga cccggcacag
1860
ctgccagagc aggcgtccaa ggctgtcacc aggattggca agagattggg agagtcctag
1920
ctgcttagct ggcatgtggc cgcatgagat gccaggagac ccttccctgc ccatggagag
1980
taggctgcgc cccccagccc ttcctgacgc tcagcctcgg ggcctctctc caactctgcc
2040
ggcccaccgt ggcatcggga ggccatgctc aggtctgaag caggtttggg gcctgctgac
2100
agcaatagcc cgcctttggg aaccccttgc tgtgaactct ctcactcagt gacctcagtc
2160
accaacctcc tctgccctcg gggcagccca cacaaagggg aagtgctggc cgtgctggtc
2220
ctgccctgct ggtggcctgc cgggcctggc gccggtgagc ggaatcgatg ggatgagggt
2280
gacagggcct gctcctgtcc tgaggcccag ccttgtccct cctgccacgt cctgtccaca
2340
tgcatgcctc tgcctgatgc cctgctccac tctctggtct gcccgtgggg cagttggaag
2400
gcgtctttcc ttctcccctc aactctgaca gcacccagcc cttgtggatg gacttgggct
2460
tctattcagg cttatgcatg gcaggctgcc aggggggaagt gccttcttca gaggtcctcc
2520
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```
aggacacatg tgtgcagaaa cggtggatgt ggaacacaca ggaccagaat ggaagcgtgt
2580
gatgcacggt ggctgctctg gctgagaggc cctgctgggc atgtttcatc tgtccccttt
2640
tagctccacc tgacattgca ggatccatgg ggactcagcc cagggccttc tcggatgtca
2700
cctcaccgct gtggcccttc tgccgttctt ctccacttgg ctccagctgc agctgttgac
2760
agatcaagca tgtcctgtgg gagcttagaa ccctgaagtt ctagtgtctg aaagatcaga
2820
ctccacgtcc tgctgtcagc cttgtcatct tgtctgatgt ctttcagctg ggagccccaa
2880
accaggacag ttctcggacc aaagatgccc ccacactcaa aagtctgtcc cgtcttgtgt
2940
ttggagaagg aaacaatgtt ggcaggcagc actctgtggt ggtcagccct cagagctgtt
3000
tctaggcatc tctcagatca gacagcaaag aatctaccca gatctgggct gggtggaggt
3060
gtggctgggc tgggggccat tctgagcctg cagtgagagt ttggcccagc ctcagtcctt
3120
gctcttctct ggctacctct gcagggagct gcaggggcaa gcactctctc cagcactcag
3180
gaagcccggc cgagggtacc tcctcgtgga aagaatgcac tttaaagctc tgctgaggag
3240
ttcggagccc aggctttcag gcgacctctg ccctccctgc ctctcctcac cctccctctc
3300
ttcctgcagg gcctgggaag ggctttgagg gagcctggga gccatgtgaa gaggggcacg
3360
cctgggctgt cccacagttt agatccagtt ggaggttctc cctggctcct gcaggcctgc
3420
ggggatctct ccccacttca ggcctccggc cagctgcctg ccctcttgtc tgtgcttcag
3480
ccctgcacaa aagcagcttg gtgacaccac tcagccaccc agagtacgtg tttacaggct
3540
ttccagatca ccttcctgtg gggtgaacgt aatgaggcgg ggctggtcct tggaatttcc
3600
cctggaaaat ggtaacagac tccatccttg acccggggat gagcatgaag gcattgtccc
3660
aaaggcagag gccaccgtgg taggaattcc accaaggcca gaagggaaaa aggaagaacc
3720
caccgtgtct ggctgtgcgg ccctggggga gggtcgtgag tgcagcccct ctctacttcc
3780
gtgcctttgt aaaacgtgta gataaccgca gtggttggct gagccaagaa ctctcctaaa
3840
tcagtggctt tctccccacc ccttgctggg gagtcatttt taaaaaaatc tgtgggatat
3900
aaaattggcc tcctgctgct tcagcctacc tctccctctg ctgacttaat gtcgtgattc
3960
tgtttcttca gatatttaag gctgttaggt tgtgtgagcc ttgaagtgtg tgtgtgtgtc
4020
ccagcgactg tccactgtcc aggagatgca tgtctttgta ttggagatat ttctgtaact
4080
cattctcttg gtgctcacga ttgccatggc cataggccca cagtgccgta tctgctgcag
4140
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```
acatgattgt ttcttgttct agaggttttc ttgttttcga atcttgcctg atgaatccag
4200
ccagaccaag gggcctagat ttgacctctg tcctgggctc ctgggccagg tgcaggaaca
4260
tctgaggcca ctctgctggc cacctccagt gggtgctgac cacaggatgg gctttgttta
4320
cactcatttt caccctgatt cttgcccca ctttcataaa agaaacttca aaatgctgac
4380
gctttggaga gtaagaaaat caatcttggc tgggcacggt ggctcctgcc tgtgatccta
4440
gcactttggg aggctgaagc tgaaggatca cttgagctca ggagttggag accaaccctg
4500
gcaacataac aagaccctgt ctctacaaaa aaaaaaaa
4538
```

```
<210> 5926
<211> 526
<212> PRT
<213> Homo sapiens
```

```
<400> 5926
Met Asp Glu Gln Gly Cys Glu His Thr Ser Arg Thr Glu Asp Pro Phe
1               5                   10                  15
Ile Gln Pro Thr Asp Phe Gly Pro Ser Glu Pro Pro Leu Ser Val Pro
                20                  25                  30
Gln Pro Phe Leu Pro Val Phe Thr Met Pro Leu Leu Ser Pro Ser Pro
            35                  40                  45
Ala Pro Pro Pro Ile Ser Pro Val Leu Pro Leu Val Pro Pro Pro Ala
        50                  55                  60
Thr Ala Leu Asn Pro Pro Ala Pro Pro Thr Phe His Gln Pro Gln Lys
65                  70                  75                  80
Phe Ala Gly Val Asn Lys Ala Pro Ser Val Ile Thr His Thr Ala Ser
                85                  90                  95
Ala Thr Leu Thr His Asp Ala Pro Ala Thr Thr Phe Ser Gln Ser Gln
            100                 105                 110
Gly Leu Val Ile Thr Thr His His Pro Ala Pro Ser Ala Ala Pro Cys
        115                 120                 125
Gly Leu Ala Leu Ser Pro Val Thr Arg Pro Pro Gln Pro Arg Leu Thr
        130                 135                 140
Phe Val His Pro Lys Pro Val Ser Leu Thr Gly Gly Arg Pro Lys Gln
145                 150                 155                 160
Pro His Lys Ile Val Pro Ala Pro Lys Pro Glu Pro Val Ser Leu Val
                165                 170                 175
Leu Lys Asn Ala Arg Ile Ala Pro Ala Ala Phe Ser Gly Gln Pro Gln
            180                 185                 190
Ala Val Ile Met Thr Ser Gly Pro Leu Lys Arg Glu Gly Met Leu Ala
        195                 200                 205
Ser Thr Val Ser Gln Ser Asn Val Val Ile Ala Pro Ala Ala Ile Ala
        210                 215                 220
Arg Ala Pro Gly Val Pro Glu Phe His Ser Ser Ile Leu Val Thr Asp
225                 230                 235                 240
Leu Gly His Gly Thr Ser Ser Pro Pro Ala Pro Val Ser Arg Leu Phe
                245                 250                 255
Pro Ser Thr Ala Gln Asp Pro Leu Gly Lys Gly Glu Gln Val Pro Leu  _ _ _ _
```

```
                    260                 265                 270
  His Gly Gly Ser Pro Gln Val Thr Val Thr Gly Pro Ser Arg Asp Cys
          275                 280                 285
  Pro Asn Ser Gly Gln Ala Ser Pro Cys Ala Ser Glu Gln Ser Pro Ser
          290                 295                 300
  Pro Gln Ser Pro Gln Asn Asn Cys Ser Gly Lys Ser Asp Pro Lys Asn
  305                 310                 315                 320
  Val Ala Ala Leu Lys Asn Arg Gln Met Lys His Ile Ser Ala Glu Gln
                  325                 330                 335
  Lys Arg Arg Phe Asn Ile Lys Met Cys Phe Asp Met Leu Asn Ser Leu
                  340                 345                 350
  Ile Ser Asn Asn Ser Lys Leu Thr Ser His Ala Ile Thr Leu Gln Lys
                  355                 360                 365
  Thr Val Glu Tyr Ile Thr Lys Leu Gln Gln Glu Arg Gly Gln Met Gln
    , 370                 375                 380
  Glu Glu Ala Arg Arg Leu Arg Glu Glu Ile Glu Glu Leu Asn Ala Thr
  385                 390                 395                 400
  Ile Ile Ser Cys Gln Gln Leu Leu Pro Ala Thr Gly Val Pro Val Thr
                  405                 410                 415
  Arg Arg Gln Phe Asp His Met Lys Asp Met Phe Asp Glu Tyr Val Lys
                  420                 425                 430
  Thr Arg Thr Leu Gln Asn Trp Lys Phe Trp Ile Phe Ser Ile Ile Ile
          435                 440                 445
  Lys Pro Leu Phe Glu Ser Phe Lys Gly Met Val Ser Thr Ser Ser Leu
          450                 455                 460
  Glu Glu Leu His Arg Thr Ala Leu Ser Trp Leu Asp Gln His Cys Ser
  465                 470                 475                 480
  Leu Pro Ile Leu Arg Pro Met Val Leu Ser Thr Leu Arg Gln Leu Ser
                  485                 490                 495
  Thr Ser Thr Ser Ile Leu Thr Asp Pro Ala Gln Leu Pro Glu Gln Ala
                  500                 505                 510
  Ser Lys Ala Val Thr Arg Ile Gly Lys Arg Leu Gly Glu Ser
          515                 520                 525
```

```
<210> 5927
<211> 1786
<212> DNA
<213> Homo sapiens
```

```
<400> 5927
ctccacactt tattttgct ggctggattt gtcattttgc tgtcagaaca ggcctacaac
60
atacctcaga tgttttcct ttaccttgtc attctgagca aaagcatgac tccatcacct
120
gtctgggcac ataccgagtc tttgtctgga tggtgtcagc acatcctgca cactcagcgg
180
caaccctgaa ataacatct accacctgcc aggcaattgg ctgactgcct ccgtgatctt
240
cagggcatc gagggacaat gtatttagtc atgcacctct gtaagtgcag ggaaatgtac
300
tgggacacct ttcgattccc aaggaaataa aaggaaatg acaaacacat agtcacgctg
360
tggatccctg tttattccca tctctgggca ggcctgtaaa gagcatcgac ccaggtctca
420
```

```
accccactgc tggtaactga gccacagaaa ctgtaagcaa gtgacactca tccagggaga
480
actactcccc taaaccggtt cttagccagc aagagaggcc cacaggaagg tctctgataa
540
cctgaagttt tgaaaagctt agaactgtgt gatcaggcca tatgcccctc agttcctgaa
600
tgttcactac cctgtggtgt ccctttgcca tggaagagac tccaaccaca cacatcagtt
660
aagctgccaa cactgtttcc tccccattct gctctgcgaa caacgcacag tccagccagg
720
agctcaacag ggagggtttt cttgttgtgt catggctgag atcaaagtca ttgtacacca
780
aggacatagt ggacagaagg gagccaacaa catttatgcc aaatcccatt cccaagatga
840
ctatatttta tagtttatta tgaggtaact gcctccagac agataagccc ctgcatgatg
900
ctgaaagtca gagcctgggg gtgaatgcca ccttatcttt gtcctcctca gctggtctgc
960
gtgtctctgc tcagaacgct gtgtagtagt gctccattgt gctgacaatg tcactctggt
1020
cctccaggag ctccagaact tgctgcagca cagcctcgct caggcccggg cggatgctca
1080
ggcgagcaca ggccaagatg tgcaggaagt gacagccctt ctccatgtga tttggtttct
1140
ggcagtcctg ctgaatgatc cggtggatct ttctgtgcag gtctttgtct tctctggtta
1200
catagtatag gttatcaaaa ccatcatctt tctggaaaac aagtcctttt cctgcagca
1260
gttgtatagc attcttaaat atactatgaa ttgccttgga agtggtgtcc ttcttaaaat
1320
tcacttggtc ggagcaggca ctgtgaatca caggctgatt ggcaagggac agcaaagact
1380
cgaccatttc cagctcctgc tggtaaaagc tctgcactct gttctccatg aggaattctt
1440
tggctttttc actcagcaaa ctcgtgagac tggggaggtc cagggcgcct ggattgctta
1500
gtgcctcttc tttctctagg gctgagctgt gaaaaggctg gtcataaact ttcctgtaga
1560
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1620
agtaagcggt ggcatgaatc tctcgctctt ctctgtatgt gcggatactg cctctgactc
1680
ggatcgtgtc cccgatctct atctttgttt tctgctcaat ggtctcttgt agcttcttaa
1740
gttgtgaggt taagctgagc tctcttgctg cacttggagc agccct
1786
```

```
<210> 5928
<211> 202
<212> PRT
<213> Homo sapiens

<400> 5928
Met Leu Glu Leu Pro Thr Ile Tyr Arg Lys Val Tyr Asp Gln Pro Phe
```

```
 1               5              10             15
His Ser Ser Ala Leu Glu Lys Glu Glu Ala Leu Ser Asn Pro Gly Ala
            20             25             30
Leu Asp Leu Pro Ser Leu Thr Ser Leu Leu Ser Glu Lys Ala Lys Glu
        35             40             45
Phe Leu Met Glu Asn Arg Val Gln Ser Phe Tyr Gln Gln Glu Leu Glu
    50             55             60
Met Val Glu Ser Leu Leu Ser Leu Ala Asn Gln Pro Val Ile His Ser
65             70             75             80
Ala Cys Ser Asp Gln Val Asn Phe Lys Lys Asp Thr Thr Ser Lys Ala
            85             90             95
Ile His Ser Ile Phe Lys Asn Ala Ile Gln Leu Leu Gln Glu Lys Gly
            100            105            110
Leu Val Phe Gln Lys Asp Asp Gly Phe Asp Asn Leu Tyr Tyr Val Thr
        115         -      120            125
Arg Glu Asp Lys Asp Leu His Arg Lys Ile His Arg Ile Ile Gln Gln
        130            135            140
Asp Cys Gln Lys Pro Asn His Met Glu Lys Gly Cys His Phe Leu His
145            150            155            160
Ile Leu Ala Cys Ala Arg Leu Ser Ile Arg Pro Gly Leu Ser Glu Ala
            165            170            175
Val Leu Gln Gln Val Leu Glu Leu Leu Glu Asp Gln Ser Asp Ile Val
            180            185            190
Ser Thr Met Glu His Tyr Tyr Thr Ala Phe
        195            200
```

```
<210> 5929
<211> 606
<212> DNA
<213> Homo sapiens

<400> 5929
nngcgcgccg ccgcgtcccc agacaaaggc ttggccggcg ccccggccc gctgcgccct
60
cgctccccgc ctccccagct cttctccgct cctcccccc gcgcttggct cggcgcgctc
120
cggccggccg caaagtttcc cgggcggcag cggcggctgc gcctcgcttc agcgatggcc
180
gcggagctga gcatggggcc agagctgccc accagcccgc tggccatgga gtatgtcaac
240
gacttcgacc tgctcaagtt cgacgtgaag aaggagccac tggggcgcgc ggagcgtccg
300
ggcaggccct gcacacgcct gcagccagcc ggctcggtgt cctccacacc gctcagcact
360
ccgtgtagct ccgtgccctc gtcgcccagc ttcagcccga ccaacagaa gacacacctc
420
gaggatctgt actggatggc gagcaactac cagcagatga acccgaggc gctcaacctg
480
acgcccgagg acgcggtgga agcgctcatc ggctcgcacc cagtgccaca gccgctgcaa
540
agcttcgaca gctttcgcgg cgctcaccac caccaccatc accaccaccc tcacccgcac
600
cacgcg
606
```

```
<210> 5930
<211> 144
<212> PRT
<213> Homo sapiens

<400> 5930
Met Ala Ala Glu Leu Ser Met Gly Pro Glu Leu Pro Thr Ser Pro Leu
1               5                   10                  15
Ala Met Glu Tyr Val Asn Asp Phe Asp Leu Leu Lys Phe Asp Val Lys
            20                  25                  30
Lys Glu Pro Leu Gly Arg Ala Glu Arg Pro Gly Arg Pro Cys Thr Arg
        35                  40                  45
Leu Gln Pro Ala Gly Ser Val Ser Ser Thr Pro Leu Ser Thr Pro Cys
    50                  55                  60
Ser Ser Val Pro Ser Ser Pro Ser Phe Ser Pro Thr Glu Gln Lys Thr
65                  70                  75                  80
His Leu Glu Asp Leu Tyr Trp Met Ala Ser Asn Tyr Gln Gln Met Asn
                85                  90                  95
Pro Glu Ala Leu Asn Leu Thr Pro Glu Asp Ala Val Glu Ala Leu Ile
            100                 105                 110
Gly Ser His Pro Val Pro Gln Pro Leu Gln Ser Phe Asp Ser Phe Arg
            115                 120                 125
Gly Ala His His His His His His His His Pro His Pro His His Ala
    130                 135                 140
```

```
<210> 5931
<211> 478
<212> DNA
<213> Homo sapiens

<400> 5931
nggagatggc ggagtcgctt gaggtctccg cgccgctccc tgtacaaact ggtgggctcg
60
ccgccttgga aagaggcttt ccggcagaga tgcctggaga gaatgagaaa cagccgggac
120
aggctcctaa acaggtaccg ccaggctgga agcagtgggc cagggaattc tcagaacagc
180
tttctagttc aagaggtgat ggaagaagag tggaatgctt tgcagtcagt ggagaattgt
240
ccagaagact tggctcagct ggaggagctg atagacatgg ctgtgctgga ggaaattcaa
300
caggagctga tcaaccaagg tacaacctga gaatcacaag cggtgtggtg gtgtgtcagt
360
gtggcctgtc catcccatct cattcttctg agttgacaga gcagaagctt cgtgcctgtt
420
tagagggtag tataaatgag cacagtgcac attgtcccca cacaccccct tcacgcgt
478
```

```
<210> 5932
<211> 109
<212> PRT
<213> Homo sapiens
```

```
<400> 5932
Xaa Arg Trp Arg Ser Arg Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys
1               5                   10                  15
Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu
            20                  25                  30
Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln
        35                  40                  45
Ala Gly Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln
        50                  55                  60
Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys
65                  70                  75                  80
Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu
                85                  90                  95
Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Gly Thr Thr
            100                 105

<210> 5933
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 5933
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60
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<210> 5934
<211> 314
<212> PRT
<213> Homo sapiens

<400> 5934
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            20   25   30
Ser Lys Val Arg Glu Gln Leu Glu Gln Glu Leu Glu Glu Leu Thr Ala
            35   40   45
Ser Leu Phe Glu Glu Ala His Lys Met Val Arg Glu Ala Asn Met Lys
        50   55   60
Gln Ala Ala Ser Glu Lys Gln Leu Lys Glu Ala Arg Gly Lys Ile Asp
65   70   75   80
Met Leu Gln Ala Glu Val Thr Ala Leu Lys Thr Leu Val Ile Thr Ser
                85   90   95
Thr Pro Ala Ser Pro Asn Arg Glu Leu His Pro Gln Leu Leu Ser Pro

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              100                105                110
Thr Lys Ala Gly Pro Arg Lys Gly His Ser Arg His Lys Ser Thr Ser
        115                120                125
Ser Thr Leu Cys Pro Ala Val Cys Pro Ala Ala Gly His Thr Leu Thr
    130                135                140
Pro Asp Arg Glu Gly Lys Glu Val Asp Thr Ile Leu Phe Ala Glu Phe
145                150                155                160
Gln Ala Trp Arg Glu Ser Pro Thr Leu Asp Lys Thr Cys Pro Phe Leu
                165                170                175
Glu Arg Val Tyr Arg Glu Asp Val Gly Pro Cys Leu Asp Phe Thr Met
            180                185                190
Gln Glu Leu Ser Val Leu Val Arg Ala Ala Val Glu Asp Asn Thr Leu
        195                200                205
Thr Ile Glu Pro Val Ala Ser Gln Thr Leu Pro Thr Val Lys Val Ala
    210                215                220
Glu Val Asp Cys Ser Ser Thr Asn Thr Cys Ala Leu Ser Gly Leu Thr
225                230                235                240
Arg Thr Cys Arg His Arg Ile Arg Leu Gly Asp Ser Lys Ser His Tyr
            245                250                255
Tyr Ile Ser Pro Ser Ser Arg Ala Arg Ile Thr Ala Val Cys Asn Phe
            260                265                270
Phe Thr Tyr Ile Arg Tyr Ile Gln Gln Gly Leu Val Arg Gln Asp Ala
        275                280                285
Glu Pro Met Phe Trp Glu Ile Met Arg Leu Arg Lys Glu Met Ser Leu
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Ala Lys Leu Gly Phe Phe Pro Gln Glu Ala
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<210> 5935
<211> 2727
<212> DNA
<213> Homo sapiens

<400> 5935
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600
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2100
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2160
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2220
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2340

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2400

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gtattatagt cagactttc tttttttcta gattgttaaa attggcaaat gaacttttt
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2580

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2727

<210> 5936
<211> 154
<212> PRT
<213> Homo sapiens

<400> 5936
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             20   25   30
Asp Gln Glu Pro Pro Pro Pro Tyr Gln Glu Gln Val Pro Val Pro Val
             35   40   45
Tyr His Pro Thr Pro Ser Gln Thr Arg Leu Ala Thr Gln Leu Thr Glu
         50   55   60
Glu Glu Gln Ile Arg Ile Ala Gln Arg Ile Gly Leu Ile Gln His Leu
65   70   75   80
Pro Lys Gly Val Tyr Asp Pro Gly Arg Asp Gly Ser Glu Lys Lys Ile
                 85   90   95
Arg Glu Cys Val Ile Cys Met Met Asp Phe Val Tyr Gly Asp Pro Ile
                100   105   110
Arg Phe Leu Pro Cys Met His Ile Tyr His Leu Asp Cys Ile Asp Asp
             115   120   125
Trp Leu Met Arg Ser Phe Thr Cys Pro Ser Cys Met Glu Pro Val Asp
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Ala Ala Leu Leu Ser Ser Tyr Glu Thr Asn
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<210> 5937
<211> 1536
<212> DNA
<213> Homo sapiens

<400> 5937
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5118

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<210> 5938
<211> 406
<212> PRT

<213> Homo sapiens

<400> 5938

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            20                  25                  30
Gly Lys Ser Leu Ile Val Pro Phe Lys Gly Ser Arg Val Ile Asp Ser
        35                  40                  45
Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val Gln Leu Met
    50                  55                  60
Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys Val Ala Leu Phe
65              70                  75                  80
Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr Gly Glu Gly Thr Val
                85                  90                  95
Val Val Ser Tyr Gly Val Ser Leu Glu Asn Ala Val Leu Asp Gln Leu
            100                 105                 110
Leu Asn Leu Gly Arg Gln Leu Ile Ser Asp His Val Asp Leu Val Leu
        115                 120                 125
Cys Gln Lys Val Ile His Pro Ser Leu Lys Gln Phe Leu Asn Met His
    130                 135                 140
Arg Ile Ile Ala Ile Asp Arg Ile Gly Val Thr Leu Met Glu Pro Leu
145                 150                 155                 160
Thr Lys Met Thr Gly Thr Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys
                165                 170                 175
Pro Asn Ser Tyr Gly Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly
            180                 185                 190
Ser Lys His Phe Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser
        195                 200                 205
Leu Leu Leu Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu
    210                 215                 220
Thr Cys Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro
225                 230                 235                 240
Trp Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
                245                 250                 255
Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp Asp
            260                 265                 270
Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe Cys Ser
        275                 280                 285
Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly Gly Glu Ile
    290                 295                 300
Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val Gln Ala Asp Ser
305                 310                 315                 320
Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser Gln Cys Gly Cys Gly
                325                 330                 335
Leu Tyr Asn Ser Gln Glu Glu Leu Asn Trp Ser Phe Leu Arg Ser Thr
            340                 345                 350
Arg Arg Pro Phe Val Pro Gln Ser Cys Leu Pro His Glu Ala Val Gly
        355                 360                 365
Ser Ala Ser Asn Leu Thr Leu Asp Cys Leu Thr Ala Lys Leu Ser Gly
    370                 375                 380
Leu Gln Val Ala Val Glu Thr Ala Asn Leu Ile Leu Asp Leu Ser Tyr
385                 390                 395                 400
Val Ile Glu Asp Lys Asn
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405

<210> 5939
<211> 795
<212> DNA
<213> Homo sapiens

<400> 5939
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795

<210> 5940
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5940
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Lys Lys Gln Arg Leu Val Phe Thr Asp Leu Gln Arg Arg Thr Leu Ile
             20   25   30
Ala Ile Phe Lys Glu Asn Lys Arg Pro Ser Lys Glu Met Gln Val Thr
         35   40   45
Ile Ser Gln Gln Leu Gly Leu Glu Leu Asn Thr Val Ser Asn Phe Phe
     50   55   60
Met Asn Ala Arg Arg Arg Cys Met Asn Arg Trp Ala Glu Glu Pro Ser
65   70   75   80
Thr Ala Pro Gly Gly Pro Ala Gly Ala Thr Ala Thr Phe Ser Lys Ala

                              85   90   95

<210> 5941
<211> 2590
<212> DNA
<213> Homo sapiens

<400> 5941
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120
gctaagcata gcacatcaga gcataacaca gtgtgaggga aataaagtgt acaatgacat
180
cttctattct ggacctaata attcaataga gaaagaacta cttgtagtca ctgtggttac
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1380

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2590
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<210> 5942
<211> 89
<212> PRT
<213> Homo sapiens

<400> 5942
Met Ser Ser Leu His Gly Ser His Gln Gln Phe Phe Phe Pro Leu Leu
1               5                  10                  15
Arg Gln Ser Leu Ala Leu Leu Xaa Gln Val Gly Val Gln Trp His Asp
            20                  25                  30
Pro Gly Ser Leu Gln Pro Pro Pro Gly Phe Lys Gln Phe Ser Cys
```

```
        35                    40                    45
Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Leu Ser Ser Arg Leu
    50                    55                    60
Ala Thr Phe Cys Ile Phe Ser Arg Asp Arg Val Ser Pro Cys Trp Pro
65                    70                    75                    80
Gly Trp Ser Gln Thr Pro Asp Leu Lys
                85
```

<210> 5943
<211> 781
<212> DNA
<213> Homo sapiens

<400> 5943
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tgcttggatt gaattgttgg aaatgatctc gactcggcgc aaactaaacc aactctggat
120
ggacaacttg ttgtaattgg taaggatgaa tcttatagca agacttctgg ggtttccagc
180
atcaccaagc ttcaaagaca accatttgga gttgagacca agcctggaat cctttgctgt
240
tttcaaaacg agtttgagaa cccttgcttt ccaaagtctc atttttctgt cacccaagct
300
ggagagcaat ggcgcgatct cagctcacca caacctccgc ctcccaggtt caagcaattc
360
tcctgtctca gcctcccgag tagctgggac cacaggcacc cgccaccacg cccggctaac
420
ttttgtattt ttagtagaga cgaggtttca ccgcggtctc gatctcctga cctcatgnna
480
tccgcccacc tcggcctccc aaagtgctgg gattacaggc gtgagccact gcgcccagcc
540
cagatcagcc ttttatttag caagtcacca tcacaagaca tacaggctaa ggcttaaaag
600
aagcccttgg gtttaaaaca aatgtttagg aggagatgag aagtttctca tctttgatgg
660
ctacaaaaat catcaaaaca aattcaggtt cagagtctag aaaagatgtt actatttgca
720
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780
g
781
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<210> 5944
<211> 174
<212> PRT
<213> Homo sapiens

<400> 5944
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Ile Val Gly Asn Asp Leu Asp Ser Ala Gln Thr Lys Pro Thr Leu Asp
1                   5                   10                  15
Gly Gln Leu Val Val Ile Gly Lys Asp Glu Ser Tyr Ser Lys Thr Ser
            20                  25                  30
Gly Val Ser Ser Ile Thr Lys Leu Gln Arg Gln Pro Phe Gly Val Glu
```

```
          35                    40                    45
Thr Lys Pro Gly Ile Leu Cys Cys Phe Gln Asn Glu Phe Glu Asn Pro
      50                    55                    60
Cys Phe Pro Lys Ser His Phe Ser Val Thr Gln Ala Gly Glu Gln Trp
65                    70                    75                    80
Arg Asp Leu Ser Ser Pro Gln Pro Pro Pro Arg Phe Lys Gln Phe
                  85                    90                    95
Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp His Arg His Pro Pro Pro
              100                   105                   110
Arg Pro Ala Asn Phe Cys Ile Phe Ser Arg Asp Glu Val Ser Pro Arg
          115                   120                   125
Ser Arg Ser Pro Asp Leu Met Xaa Ser Ala His Leu Gly Leu Pro Lys
      130                   135                   140
Cys Trp Asp Tyr Arg Arg Glu Pro Leu Arg Pro Ala Gln Ile Ser Leu
145                   150                   155                   160
Leu Phe Ser Lys Ser Pro Ser Gln Asp Ile Gln Ala Lys Ala
              165                   170
```

<210> 5945
<211> 869
<212> DNA
<213> Homo sapiens

<400> 5945

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gtgcctgggc tggtgggaac accgcccgaa gaagcaccat gatttcggcc gcgcagttgt
120
tggatgagtt aatgggccgg gaccgaaacc tagccccgga cgagaagcgc agcaacgtgc
180
ggtgggacca cgagagcgtt tgtaaatatt atctctgtgg tttttgtcct gcggaattgt
240
tcacaaatac acgttctgat cttgatgtat ttggaagagg agataacatt agagatgtca
300
gcaaattttt ggaagatgac aagtggatgg aggagtagca gcaaacgcaa cagagcagag
360
caacctgtac cctaaaagcc tgcagaaggg gatactaaac agaagcgagt gtttgatcag
420
cagaaccctg gacaggctca ggatttggag gcaccaggca gaagaaaaga ggattcttct
480
ctagagaaag tgaacagttc ctgagaagtg atctctgcag gtccgtgtga aaaaattcat
540
gatgaaaatc tacgaaaaca gtatgagaag agctctcgtt tcatgaaagt tggctatgag
600
agagattttt tgcgatactt acagagctta cttgcagaag tagaacgtag gatcagacga
660
ggccatgctc gtttggcatt atctcaaaac cagcagtctt ctggggccgc tggcccaaca
720
ggcaaaaatg gagaaaaaat tcaggttcta acagacaaaa ttgatgtact tctgcaacag
780
attgaagaat tagggtctga aggaaaagta gaagaagccc aggggatgat gaaattagtt
840
gagcaattaa aagaagagag agaactgct
869
```

<210> 5946
<211> 121
<212> PRT
<213> Homo sapiens

<400> 5946
Glu Val Ile Ser Ala Gly Pro Cys Glu Lys Ile His Asp Glu Asn Leu
 1   5   10   15
Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly Tyr Glu
            20   25   30
Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val Glu Arg
        35   40   45
Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn Gln Gln
    50   55   60
Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Gly Glu Lys Ile Gln
65   70   75   80
Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu Glu Leu
                85   90   95
Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys Leu Val
            100   105   110
Glu Gln Leu Lys Glu Glu Arg Glu Leu
        115   120

<210> 5947
<211> 2283
<212> DNA
<213> Homo sapiens

<400> 5947
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cgagatggac tagccccaga aaagacatca ccagatagag ataagaaaaa agagcagtca
120
gaagtatctg tttctcctag agcttcaaaa catcattatt caagatcacg atcaaggtca
180
agagaaagaa aacgaaagtc agataatgaa ggaagaaaac acaggagccg gagcagaagc
240
aaagagcgtg cttatgcgcg aagagactga actgaagacg ctgcagactc agatagcaaa
300
ataataagcc tacttcatga tnnaagaacc aacttcttct taaaacaggg aagaagacat
360
gaatccaaag ataaatcctc taagaaacat aagtctgagg aacataatga caaagaacat
420
tcttctgata aaggaagaga gcgactaaat tcatctgaaa atggtgagga caggcacaaa
480
cgcaaagaaa gaaagtcatc aagaggcaga agtcactcaa gatctaggtc tcgtgaaaga
540
cgccatcgta gtagaagcag ggagcggaag aagtctcgat ccaggagtag ggagcggaag
600
aaatcgagat ccagaagcag agagaggaag aaatcgagat ccagaagcag ggaaagaaaa
660
cggcggatca ggtctcgttc ccgctcaaga tcaagacaca ggcataggac tagaagcagg
720

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agtaggacaa ggagtaggag tcgagataga aagaagagaa ttgaaaagcc gagaagattt
780
agcagaagtt taagccggac tccaagtcca cctcccttca gaggcagaaa cacagcaatg
840
gatgcacagg aagctttagc tagaaggttg gaaagggcaa agaaattaca agaacagcga
900
gaaaaggaaa tggttgaaaa acaaaaacaa caagaaatag ctgcagcagc tgcagctact
960
ggaggttctg ttctcaatgt tgctgccctg ttggcatcag gaacacaagt aacacctcag
1020
atagccatgg cagctcagat ggcagccctg caagctaaag ctttggcaga gacaggaata
1080
gctgttccta gctactataa cccagccgct gttaatccaa tgaaatttgc tgaacaagag
1140
aaaaaaagga aaatgctttg gcagggcaag aaagaagggg acaaatccca atctgctgaa
1200
atatgggaaa aattgaattt tggaaacaag gaccaaaatg tcaaatttag gaaattgatg
1260
ggtattaaga gtgaagatga agctggatgt agctcagttg atgaagaaag ttacaagact
1320
ctgaagcagc aggaagaagt atttcgaaat ttagatgctc agtatgaaat ggcaagatca
1380
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1440
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1500
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1620
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1680
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1740
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1980
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2160
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2280
aaa
2283
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<210> 5948
<211> 76
<212> PRT
<213> Homo sapiens

<400> 5948
Met Ala Ala Ser Asp Thr Glu Arg Asp Gly Leu Ala Pro Glu Lys Thr
1   5   10   15
Ser Pro Asp Arg Asp Lys Lys Lys Glu Gln Ser Glu Val Ser Val Ser
            20   25   30
Pro Arg Ala Ser Lys His His Tyr Ser Arg Ser Arg Ser Arg Ser Arg
        35   40   45
Glu Arg Lys Arg Lys Ser Asp Asn Glu Gly Arg Lys His Arg Ser Arg
    50   55   60
Ser Arg Ser Lys Glu Arg Ala Tyr Ala Arg Arg Asp
65   70   75

<210> 5949
<211> 4706
<212> DNA
<213> Homo sapiens

<400> 5949
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120
gcgggtaggc cggtagggcc tgcggtccgg cctgcgggag aactgggtcg tcagtcctcc
180
gagtggtggg gctggggact ttgagggagt tggctctagg gcacagtccc tgcctggcca
240
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300
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360
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420
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480
gtgagaagct gttctcagcc acgagtcctg tgcaagatca ctaatgatta cctggcattt
540
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600
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720
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780
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840
tattcagaat caaagaggat aatgagagat ttgagaagtt gtgtcgcagc atcctgagca
900

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1440
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2100
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2160
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2220
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2340
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2400
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2460
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2520
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2820

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3540

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3660

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3720

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3780

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3900

ccctgcctcc agggctcctg ggctgccagg gaccttcagc tcccagaggc agtgtggtcc
3960

tgggaatgtg accaacatgc caggtgacat tggcccctag accctctcta tagccatgag
4020

actccttgtg gcctcaagaa atttagacgc ccacgacagc actacacagc atctccaggt
4080

gatgcccaag gcacagggct gcagaaaata aacctccaga ttccaccaac acgggtccat
4140

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4706
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<210> 5950
<211> 397
<212> PRT
<213> Homo sapiens

<400> 5950
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Met Pro Arg Ala Ala Arg Lys Ala Val Cys Ala Glu Gln Trp Met Phe
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Leu Thr Phe Phe Lys Asp Gly Tyr Glu Gln Leu Arg Gln Leu Ser Gln
             20                  25                  30
His Ala Met Lys Gly Val Ile Arg Val Lys Phe Val Asn Asp Leu Gly
         35                  40                  45
Val Asp Glu Ala Gly Ile Asp Gln Asp Gly Val Phe Lys Glu Phe Leu
     50                  55                  60
Glu Glu Ile Ile Lys Arg Val Phe Asp Pro Ala Leu Asn Leu Phe Lys
 65                  70                  75                  80
Thr Thr Ser Gly Asp Glu Arg Leu Tyr Pro Ser Pro Thr Ser Tyr Ile
                 85                  90                  95
His Glu Asn Tyr Leu Gln Leu Phe Glu Phe Val Gly Lys Met Leu Gly
             100                 105                 110
Lys Ala Val Tyr Glu Gly Ile Val Val Asp Val Pro Phe Ala Ser Phe
         115                 120                 125
Phe Leu Ser Gln Leu Leu Gly His His Ser Val Phe Tyr Ser Ser
     130                 135                 140
Val Asp Glu Leu Pro Ser Leu Asp Ser Glu Phe Tyr Lys Asn Leu Thr
 145                 150                 155                 160
Ser Ile Lys Arg Tyr Asp Gly Asp Ile Thr Asp Leu Gly Leu Thr Leu
                 165                 170                 175
Ser Tyr Asp Glu Asp Val Met Gly Gln Leu Val Cys His Glu Leu Ile
             180                 185                 190
Pro Gly Gly Lys Thr Ile Pro Val Thr Asn Glu Asn Lys Ile Ser Tyr
         195                 200                 205
Ile His Leu Met Ala His Phe Arg Met His Thr Gln Ile Lys Asn Gln
```

```
        210                    215                    220
Thr Ala Ala Leu Ile Ser Gly Phe Arg Ser Ile Ile Lys Pro Glu Trp
225                    230                    235                    240
Ile Arg Met Phe Ser Thr Pro Glu Leu Gln Arg Leu Ile Ser Gly Asp
                245                    250                    255
Asn Ala Glu Ile Asp Leu Glu Asp Leu Lys Lys His Thr Val Tyr Tyr
                260                    265                    270
Gly Gly Phe His Gly Ser His Arg Val Ile Ile Trp Leu Trp Asp Ile
            275                    280                    285
Leu Ala Ser Asp Phe Thr Pro Asp Glu Arg Ala Met Phe Leu Lys Phe
        290                    295                    300
Val Thr Ser Cys Ser Arg Pro Pro Leu Leu Gly Phe Ala Tyr Leu Lys
305                    310                    315                    320
Pro Pro Phe Ser Ile Arg Cys Val Glu Val Ser Asp Asp Gln Asp Thr
                325                    330                    335
Gly Asp Thr Leu Gly Ser Val Leu Arg Gly Phe Phe Thr Ile Arg Lys
                340                    345                    350
Arg Glu Pro Gly Gly Arg Leu Pro Thr Ser Ser Thr Cys Phe Asn Leu
            355                    360                    365
Leu Lys Leu Pro Asn Tyr Ser Lys Lys Ser Val Leu Arg Glu Lys Leu
        370                    375                    380
Arg Tyr Ala Ile Ser Met Asn Thr Gly Phe Glu Leu Ser
385                    390                    395
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<210> 5951
<211> 1724
<212> DNA
<213> Homo sapiens

<400> 5951
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120
agaggagggg tcgccaggtt cccgtctgct ttcggaggcg gatcgagcgg gtgacttttg
180
tgcattcgtt ttaatttttg gaaatctctc tttttttcctc cctcgctcgc tgccgggcat
240
gtcctgatct ggcggccgct cctaccaccc tgggcagccg agcagagtgg tccccagcgg
300
tctccctccc tgcctccctg actttgcaac accgcgttcc gggaggaccg gcctcggcga
360
gggaggaggc gggggagctg cgaacaccca gacccaaacc ctgacatgct ctggggcgga
420
gaggaggaag ccaggagctg agcgcgccgc gtgggctgct tcgccctccg gctccgagcg
480
ccgggctccg ggcgccctgc cctgcgcctg ggcagcagcc ttgctggtct tggggggcgcc
540
ccccgcttcc cgcccggggg gttcgcggcc ggcaggacca tgctgctgaa agagtaccgg
600
atctgcatgc cgctcaccgt agacgagtac aaaattggac agctgtacat gatcagcaaa
660
cacagccatg aacagagtga ccggggagaa ggggtggagg tcgtccagaa tgagcccttt
720
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gaggaccctc accatggcaa tgggcagttc accgagaagc gggtgtatct caacagcaaa
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840
aactattatc cctacacaat tacagaatac acatgttcct ttctgccgaa attctccatt
900
catatagaaa ccaagtatga ggacaacaaa ggaagcaatg acaccatttt cgacaatgaa
960
gccaaagacg tggagagaga agtttgcttt attgatattg cctgcgatga aattccagag
1020
cgctactaca aagaatctga ggatcctaag cacttcaagt cagagaagac aggacgggga
1080
cagttgaggg aaggctggag agatagtcat cagcctatca tgtgctccta caagctggtg
1140
actgtgaagt ttgaggtctg ggggcttcag accagagtgg aacaatttgt acacaaggtg
1200
gtccgagaca ttctgctgat tggacataga caggcttttg catgggttga tgagtggtat
1260
gacatgacaa tggatgaagt ccgagaattt gaacgagcca ctcaggaagc caccaacaag
1320
aaaatcggca ttttcccacc tgcaatttct atctccagca tccccctgct gccttcttcc
1380
gtccgcagtg cgccttctag tgctccatcc acccctctct ccacagacgc acccgaattt
1440
ctgtccgttc ccaaagatcg gccccggaaa aagtctgccc cagaaactct cacacttcca
1500
gaccctgaga aaaaagccac cctgaattta cccggcatgc actcttcaga taagccatgt
1560
cggcccaaat ctgagtaact ttatataaat atctcatggg gttttatatt ttcatttgtt
1620
gttgttgttt tttttaaga atcttctgat agagaaaaag actgctttgt cactcaaaca
1680
tgttccttcg accttaaaaa aaaaaaaaaa aaaaaaaaa aaaa
1724


<210> 5952
<211> 378
<212> PRT
<213> Homo sapiens

<400> 5952
Ala Arg Arg Val Gly Cys Phe Ala Leu Arg Leu Arg Ala Pro Gly Ser
1               5                   10                  15
Gly Arg Pro Ala Leu Arg Leu Gly Ser Ser Leu Ala Gly Leu Gly Gly
            20                  25                  30
Ala Pro Arg Phe Pro Pro Gly Gly Phe Ala Ala Gly Arg Thr Met Leu
        35                  40                  45
Leu Lys Glu Tyr Arg Ile Cys Met Pro Leu Thr Val Asp Glu Tyr Lys
    50                  55                  60
Ile Gly Gln Leu Tyr Met Ile Ser Lys His Ser His Glu Gln Ser Asp
65                  70                  75                  80
Arg Gly Glu Gly Val Glu Val Val Gln Asn Glu Pro Phe Glu Asp Pro
                85                  90                  95
His His Gly Asn Gly Gln Phe Thr Glu Lys Arg Val Tyr Leu Asn Ser
```

5133

```
                    100                 105                 110
Lys Leu Pro Ser Trp Ala Arg Ala Val Val Pro Lys Ile Phe Tyr Val
            115                 120                 125
Thr Glu Lys Ala Trp Asn Tyr Tyr Pro Tyr Thr Ile Thr Glu Tyr Thr
    130                 135                 140
Cys Ser Phe Leu Pro Lys Phe Ser Ile His Ile Glu Thr Lys Tyr Glu
145                 150                 155                 160
Asp Asn Lys Gly Ser Asn Asp Thr Ile Phe Asp Asn Glu Ala Lys Asp
                165                 170                 175
Val Glu Arg Glu Val Cys Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro
            180                 185                 190
Glu Arg Tyr Tyr Lys Glu Ser Glu Asp Pro Lys His Phe Lys Ser Glu
        195                 200                 205
Lys Thr Gly Arg Gly Gln Leu Arg Glu Gly Trp Arg Asp Ser His Gln
    210                 215                 220
Pro Ile Met Cys Ser Tyr Lys Leu Val Thr Val Lys Phe Glu Val Trp
225                 230                 235                 240
Gly Leu Gln Thr Arg Val Glu Gln Phe Val His Lys Val Val Arg Asp
                245                 250                 255
Ile Leu Leu Ile Gly His Arg Gln Ala Phe Ala Trp Val Asp Glu Trp
            260                 265                 270
Tyr Asp Met Thr Met Asp Glu Val Arg Glu Phe Glu Arg Ala Thr Gln
            275                 280                 285
Glu Ala Thr Asn Lys Lys Ile Gly Ile Phe Pro Pro Ala Ile Ser Ile
    290                 295                 300
Ser Ser Ile Pro Leu Leu Pro Ser Ser Val Arg Ser Ala Pro Ser Ser
305                 310                 315                 320
Ala Pro Ser Thr Pro Leu Ser Thr Asp Ala Pro Glu Phe Leu Ser Val
            325                 330                 335
Pro Lys Asp Arg Pro Arg Lys Lys Ser Ala Pro Glu Thr Leu Thr Leu
        340                 345                 350
Pro Asp Pro Glu Lys Lys Ala Thr Leu Asn Leu Pro Gly Met His Ser
    355                 360                 365
Ser Asp Lys Pro Cys Arg Pro Lys Ser Glu
    370                 375
```

<210> 5953
<211> 777
<212> DNA
<213> Homo sapiens

<400> 5953
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tttcggcacg aggcccggag tcgtaagagg tctccgcgcc gctccctgta caaactggtg
60
ggctcgccgc cttggaaaga ggctttccgg cagagatgcc tggagagaat gagaaacagc
120
cgggacaggc tcctaaacag gtaccgccag ctgngaagca gtgggccagg gaattctcag
180
aacagctttc tagttcaaga ggtgatggaa gaagagtgga atgctttgca gtcagtggag
240
aattgtccag aagacttggc tcagctggag gagctgatag acatggctgt gctggaggaa
300
attcaacagg agctgatcaa ccaagagcag tccatcatca gcgagtatga gaagagcttg
360
```

cagtttgatg aaaagtgtct cagcatcatg ctggctgagt gggaggcaaa cccactcatc
420
tgtcctgtat gtacaaagcc tgtgatactt gggctgtgat cctctagagc cagcttggac
480
tcacatcatt ctatggggtt gaagacaact cattccctct gaggagcctt gtacatacaa
540
gccttttatt tataacttat tttgtattga aacttttaaa caatactgaa gaaaaaaaa
600
cttttccgac atctgttctt ggtcttttgt gacgcaggtt gaagggggag gaatagaaaa
660
agacaaactg ccttggagga gataaaccaa ttttatgtct atcatgttat acaaaaatct
720
agaaataata gatttgtaca gaaaaaaatg ataataaatg agaacacaaa acatata
777

<210> 5954
<211> 152
<212> PRT
<213> Homo sapiens

<400> 5954
Phe Arg His Glu Ala Arg Ser Arg Lys Arg Ser Pro Arg Arg Ser Leu
1   5   10   15
Tyr Lys Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg
            20   25   30
Cys Leu Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr
        35   40   45
Arg Gln Leu Xaa Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu
    50   55   60
Val Gln Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu
65   70   75   80
Asn Cys Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala
                85   90   95
Val Leu Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Glu Gln Ser Ile
                100   105   110
Ile Ser Glu Tyr Glu Lys Ser Leu Gln Phe Asp Glu Lys Cys Leu Ser
            115   120   125
Ile Met Leu Ala Glu Trp Glu Ala Asn Pro Leu Ile Cys Pro Val Cys
        130   135   140
Thr Lys Pro Val Ile Leu Gly Leu
145   150

<210> 5955
<211> 1459
<212> DNA
<213> Homo sapiens

<400> 5955
nncaattgga ctgcattatc aaacacatgt gctatgtaca tcctcagtgc acctgccagc
60
agatatcctg gagggctcat gagtgaattt agtccaagat ttaaagccct gcccccaggt
120
gctcagcctg tgatctgtat ccactcagca tgcacttggg cagatgdattt gtctgtgtgc
180

taccccttccc cccatattac catacatatg cacggcggga ccagcagcga cggtagcagc
240

agcatggccg cgatctatgg gggtgtagag ggggggaggca cacgatccga ggtcctttta
300

gtctcagagg atgggaagat cctggcagaa gcagatggac tgagcacaaa ccactggctg
360

atcgggacag acaagtgtgt ggagaggatc aatgagatgg tgaacagggc caaacggaaa
420

gcaggggtgg atcctctggt accgctgcga agcttgggcc tatctctgag cggtggggac
480

caggaggacg cggggaggat cctgatcgag gagctgaggg accgatttcc ctacctgagt
540

gaaagctact taatcaccac cgatgccgcc ggctccatcg ccacagctac accggatggt
600

ggagttgtgc tcatatctgg aacaggctcc aactgcaggc tcatcaaccc tgatggctcc
660

gagagtggct gcggcggctg gggccatatg atgggtgatg agggttcagc cctctctgct
720

ccctcagcct actggatcgc acaccaagca gtgaaaatag tgtttgactc cattgacaac
780

ctagaggcgg ctcctcatga tatcggctac gtcaaacagg ccatgttcca ctatttccag
840

gtgccagatc ggctagggat actcactcac ctgtataggg actttgataa atgcaggttt
900

gctgggtttt gccggaaaat tgcagaaggt gctcagcagg agaccccct ttcccgctat
960

atcttcagga aggctgggga gatgctgggc agacacatcg tagcagtgtt gcccgagatt
1020

gacccggtct tgttccaggg caagattgga ctccccatcc tgtgcgtggg ctctgtgtgg
1080

aagagctggg agctgctgaa ggaaggtttt cttttggcgc tgacccaggg cagagagatc
1140

caggctcaga acttcttctc cagcttcacc ctgatgaagc tgaggcactc ctccgctctg
1200

ggtggggcca gcctaggggc caggcacatc gggcacctcc tccccatgga ctatagcgcc
1260

aatgccattg ccttctattc ctacaccttt tcctagggg ctggtcccgg ctccaccccc
1320

tccaagctca gtggacactg ggtctgaaag gaaggagtct tttgcttcct ttctcctttt
1380

tacaaaaaca aacatagaag aaaataaatg cactttatcc actccccaaa aaaaaaaaaa
1440

aaaaaaaaa aagtcgacg
1459

<210> 5956
<211> 431
<212> PRT
<213> Homo sapiens

<400> 5956
Xaa Asn Trp Thr Ala Leu Ser Asn Thr Cys Ala Met Tyr Ile Leu Ser
 1   5   10   15
Ala Pro Ala Ser Arg Tyr Pro Gly Gly Leu Met Ser Glu Phe Ser Pro

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                    20                    25                     30
Arg Phe Lys Ala Leu Pro Pro Gly Ala Gln Pro Val Ile Cys Ile His
        35                    40                    45
Ser Ala Cys Thr Trp Ala Asp Asp Leu Ser Val Cys Tyr Pro Ser Pro
        50                    55                    60
His Ile Thr Ile His Met His Gly Gly Thr Ser Ser Asp Gly Ser Ser
65                    70                    75                    80
Ser Met Ala Ala Ile Tyr Gly Gly Val Glu Gly Gly Gly Thr Arg Ser
                85                    90                    95
Glu Val Leu Leu Val Ser Glu Asp Gly Lys Ile Leu Ala Glu Ala Asp
            100                   105                   110
Gly Leu Ser Thr Asn His Trp Leu Ile Gly Thr Asp Lys Cys Val Glu
            115                   120                   125
Arg Ile Asn Glu Met Val Asn Arg Ala Lys Arg Lys Ala Gly Val Asp
        130                   135                   140
Pro Leu Val Pro Leu Arg Ser Leu Gly Leu Ser Leu Ser Gly Gly Asp
145                   150                   155                   160
Gln Glu Asp Ala Gly Arg Ile Leu Ile Glu Glu Leu Arg Asp Arg Phe
                165                   170                   175
Pro Tyr Leu Ser Glu Ser Tyr Leu Ile Thr Thr Asp Ala Ala Gly Ser
                180                   185                   190
Ile Ala Thr Ala Thr Pro Asp Gly Gly Val Val Leu Ile Ser Gly Thr
            195                   200                   205
Gly Ser Asn Cys Arg Leu Ile Asn Pro Asp Gly Ser Glu Ser Gly Cys
        210                   215                   220
Gly Gly Trp Gly His Met Met Gly Asp Glu Gly Ser Ala Leu Ser Ala
225                   230                   235                   240
Pro Ser Ala Tyr Trp Ile Ala His Gln Ala Val Lys Ile Val Phe Asp
                245                   250                   255
Ser Ile Asp Asn Leu Glu Ala Ala Pro His Asp Ile Gly Tyr Val Lys
            260                   265                   270
Gln Ala Met Phe His Tyr Phe Gln Val Pro Asp Arg Leu Gly Ile Leu
        275                   280                   285
Thr His Leu Tyr Arg Asp Phe Asp Lys Cys Arg Phe Ala Gly Phe Cys
    290                   295                   300
Arg Lys Ile Ala Glu Gly Ala Gln Gln Gly Asp Pro Leu Ser Arg Tyr
305                   310                   315                   320
Ile Phe Arg Lys Ala Gly Glu Met Leu Gly Arg His Ile Val Ala Val
                325                   330                   335
Leu Pro Glu Ile Asp Pro Val Leu Phe Gln Gly Lys Ile Gly Leu Pro
            340                   345                   350
Ile Leu Cys Val Gly Ser Val Trp Lys Ser Trp Glu Leu Leu Lys Glu
        355                   360                   365
Gly Phe Leu Leu Ala Leu Thr Gln Gly Arg Glu Ile Gln Ala Gln Asn
        370                   375                   380
Phe Phe Ser Ser Phe Thr Leu Met Lys Leu Arg His Ser Ser Ala Leu
385                   390                   395                   400
Gly Gly Ala Ser Leu Gly Ala Arg His Ile Gly His Leu Leu Pro Met
            405                   410                   415
Asp Tyr Ser Ala Asn Ala Ile Ala Phe Tyr Ser Tyr Thr Phe Ser
        420                   425                   430
```

<210> 5957
<211> 855

<212> DNA
<213> Homo sapiens

<400> 5957
atggcggagt cgttgaggtc tccgcgccgc tccctgtaca aactggtggg ctcgccgcct
60
tggaaagagg ctttccggca gagatgcctg gagagaatga gaaacagccg ggacaggctc
120
ctaaacaggt accgccaggc tggaagcagt gggccaggga attctcagaa cagctttcta
180
gttcaagagg tgatggaaga agagtggaat gctttgcagt cagtggagaa ttgtccagaa
240
gacttggctc agctggagga gctgatagac atggctgtgc tggaggaaat tcaacaggag
300
ctgatcaacc aaggcctgtg atacttgggc tgtgatcctc tagagccagc ttggactcac
360
atcattctat ggggttgaag acaactcatt ccctctgagg agccttgtac atacaagcct
420
tttatttata acttattttg tattgaaact tttaaacaat actgaagaaa aaaaaacttt
480
tccgacatct gttcttggtc ttttgtgaca caggttgaag ggggaggaat agaaaaagac
540
aaactgcctt ggaggagata aaccaatttt atgtctatca tgttatacaa aaatctagaa
600
ataatagatt tgtacagaaa aaaatgataa taaatgagag cacaaaacat ataatttaaa
660
tctggtattt tttcccccat gatattagga tgataatcat ttcaaagcac atgtctagct
720
tcagagtagg atttgttcac tggccaaagc ctgccatgaa actatggctt tcagcatctg
780
tctgctctac tggctcttga caaaactctt gaggtcttca agaaaagtaa tgtactcctg
840
gtgctccagg gctgt
855

<210> 5958
<211> 106
<212> PRT
<213> Homo sapiens

<400> 5958
Met Ala Glu Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val
1   5   10   15
Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg
            20   25   30
Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly
        35   40   45
Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val
    50   55   60
Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys Pro Glu
65   70   75   80
Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu Glu Glu
                85   90   95
Ile Gln Gln Glu Leu Ile Asn Gln Gly Leu

                    100   105

<210> 5959
<211> 830
<212> DNA
<213> Homo sapiens

<400> 5959
gatgagaaga ttcagccaat attagacaaa gtaggctctt tggtaaacgc aaggcttgaa
60
ttttctcggg gccttatgat gctggttctt gagaagttag ccactgatat tccttgtctg
120
ctatatgatg acaatctctt ctgtcatttg gtggatgaag tactcttgtt tgaaagggag
180
ctacacagtg ttcatggcta tcctggcact tttgctaatt gtatgcatat tctatcagag
240
gaaacctgtt ttcaaagatg ggtgacgggg gagagaaaat ttgctcttca aaaaatggac
300
tcaatgcttt cctcagaagc tgcctgggta tcgcaatata aggatatcac tgacgtggat
360
gaaatgaaag ttccagattg tgcagaaact tttatgactc tactcttggt tataactgac
420
aggtataaaa atcttcccac agcttcccga aagcttcagt tcctggagtt acagaaggac
480
ttagtagatg attttaggat acgattaaca caagtgatga agaagagac tagagcttcc
540
cttggctttc gatactgtgc aattcttaat gctgtgaact acatctcaac agtactagca
600
gattgggctg acaatgtttt cttтctacaa cttcaacagg ctgcactgga ggtgtttgca
660
gagaataata ctctgagtaa attgcagcta ggacagctag cctctatgga gagctctgtc
720
tttgatgaca tgattaacct cttagaacgt ttaaagcatg atatgttgac ccgtcaagta
780
gaccacgttt ttagagaagt taaagatgct gcaaaattgt ataaaaaaga
830

<210> 5960
<211> 251
<212> PRT
<213> Homo sapiens

<400> 5960
Met Met Leu Val Leu Glu Lys Leu Ala Thr Asp Ile Pro Cys Leu Leu
1   5   10   15
Tyr Asp Asp Asn Leu Phe Cys His Leu Val Asp Glu Val Leu Leu Phe
            20   25   30
Glu Arg Glu Leu His Ser Val His Gly Tyr Pro Gly Thr Phe Ala Asn
        35   40   45
Cys Met His Ile Leu Ser Glu Glu Thr Cys Phe Gln Arg Trp Val Thr
    50   55   60
Gly Glu Arg Lys Phe Ala Leu Gln Lys Met Asp Ser Met Leu Ser Ser
65   70   75   80
Glu Ala Ala Trp Val Ser Gln Tyr Lys Asp Ile Thr Asp Val Asp Glu

```
                      85                    90                   95
Met Lys Val Pro Asp Cys Ala Glu Thr Phe Met Thr Leu Leu Leu Val
                100                   105                   110
Ile Thr Asp Arg Tyr Lys Asn Leu Pro Thr Ala Ser Arg Lys Leu Gln
            115                   120                   125
Phe Leu Glu Leu Gln Lys Asp Leu Val Asp Asp Phe Arg Ile Arg Leu
        130                   135                   140
Thr Gln Val Met Lys Glu Glu Thr Arg Ala Ser Leu Gly Phe Arg Tyr
145                   150                   155                   160
Cys Ala Ile Leu Asn Ala Val Asn Tyr Ile Ser Thr Val Leu Ala Asp
                165                   170                   175
Trp Ala Asp Asn Val Phe Phe Leu Gln Leu Gln Gln Ala Ala Leu Glu
                180                   185                   190
Val Phe Ala Glu Asn Asn Thr Leu Ser Lys Leu Gln Leu Gly Gln Leu
            195                   200                   205
Ala Ser Met Glu Ser Ser Val Phe Asp Asp Met Ile Asn Leu Leu Glu
        210                   215                   220
Arg Leu Lys His Asp Met Leu Thr Arg Gln Val Asp His Val Phe Arg
225                   230                   235                   240
Glu Val Lys Asp Ala Ala Lys Leu Tyr Lys Lys
                245                   250


<210> 5961
<211> 585
<212> DNA
<213> Homo sapiens

<400> 5961
gctcggggct gcagtgcgct ctaatggtgc ctgtgaataa ccactgcatt cagcctgggc
60
aatgaagcga gaccccgtct ctaaaaaaaa aattgagggg tcaaagagga tgccaaactt
120
aattagagac tgagacaggg cagggtgccg aggtgtctgc atgcgtttca tgtggatgcc
180
cgtgtctatt ctggcctgct cctgggcccc ctccccactc agccctggct gatgagaatg
240
ggacagggac tcccttctcg tgtccctgtg cagcgtcggc ccaggaggta gcagagcagt
300
atatgcacat ctgggtgtgc cctcctgcat gtccccacac atctgtcatt cctgtctttg
360
cacacctatg tgactcccgc atgtttgtgt ccttatgtgt cccatgcatg ctccccatct
420
gaccttgcgt gttctcgcgt gtctgtgtgc ggccagtcct gccttcactc tctcatgggt
480
ggccctggca gcatgtctgg ctccccagca ggtgagctca ggagataaga tggaagatgc
540
aacagccaat ggtcaagaag actccaaggc cccagatggg tccac
585

<210> 5962
<211> 114
<212> PRT
<213> Homo sapiens
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<400> 5962
Met Cys Gly Asp Met Gln Glu Gly Thr Pro Arg Cys Ala Tyr Thr Ala
1   5   10   15
Leu Leu Pro Pro Gly Pro Thr Leu His Arg Asp Thr Arg Arg Glu Ser
            20   25   30
Leu Ser His Ser His Gln Pro Gly Leu Ser Gly Glu Gly Ala Gln Glu
        35   40   45
Gln Ala Arg Ile Asp Thr Gly Ile His Met Lys Arg Met Gln Thr Pro
    50   55   60
Arg His Pro Ala Leu Ser Gln Ser Leu Ile Lys Phe Gly Ile Leu Phe
65   70   75   80
Asp Pro Ser Ile Phe Phe Leu Glu Thr Gly Ser Arg Phe Ile Ala Gln
                85   90   95
Ala Glu Cys Ser Gly Tyr Ser Gln Ala Pro Leu Glu Arg Thr Ala Ala
            100   105   110
Pro Ser

<210> 5963
<211> 1288
<212> DNA
<213> Homo sapiens

<400> 5963
atggggctgt tggaaagac ccaggagaag ccgcccaaag aactggtcaa tgagtggtca
60
ttgaagataa gaaaggaaat gagagttgtt gacaggcaaa taagggatat ccaaagagaa
120
gaagaaaaag tgaaacgatc tgtgaaagat gctgccaaga agggccagaa ggatgtctgc
180
atagttctgg ccaaggagat gatcaggtca aggaaggctg tgagcaagct gtatgcatcc
240
aaagcacaca tgaactcagt gctcatgggg atgaagaacc agctcgcggt cttgcgagtg
300
gctggttccc tgcagaagag cacagaagtg atgaaggcca tgcaaagtct tgtgaagatt
360
ccagagattc aggccaccat gagggagttg tccaaagaaa tgatgaaggc tgggatcata
420
gaggagatgt tagaggacac ttttgaaagc atggacgatc aggaagaaat ggaggaagaa
480
gcagaaatgg aaattgacag aattctcttt gaaattacag cagggggctt gggcaaagca
540
cccagtaaag tgactgatgc ccttccagag ccagaacctc caggagcgat ggctgcctca
600
gaggatgagg aggaggagga agaggctctg gaggccatgc agtcccggct ggccacactc
660
cgcagctagg ggctgcctac cccgctgggt gtgcacacac tcctctcaag agctgccatt
720
ttatgtgtct cttgcactac acctctgttg tgaggactac cattttggag aaggttctgt
780
ttgtctcttt tcattctctg cccaggtttt gggatcgcaa agggattgtt cttataaaag
840
tggcataaat aaatgcatca tttttaggag tatagacaga tatatcttat tgtggggagg
900

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ggaaagaaat ccatctgctc atgaagcact tctgaaaata taggtgattg cctgaatgtc
960
gaagactcta cttttgtcta taaaacacta tataaatgaa ttttaataaa tttttgcttc
1020
agcacttggc cccattgtag attgccctgt gcagtaaact ttcaaggtgt cagctgcccc
1080
agattgcttc atttgctggg tgtggaaaga gttgctatgg ccaggcatat gggatttgga
1140
agctcagcag aagtgacttc tgctctgtgg ttgctgctcc ccggctttca cagacatggt
1200
atggcagcca ttcttttatc tatttaacca agaggatgct ggggaattgt gctgcttgtc
1260
ctgttggctg gtggctgcat tatgtccg
1288
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<210> 5964
<211> 222
<212> PRT
<213> Homo sapiens

<400> 5964

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Met Gly Leu Phe Gly Lys Thr Gln Glu Lys Pro Pro Lys Glu Leu Val
1               5                   10                  15
Asn Glu Trp Ser Leu Lys Ile Arg Lys Glu Met Arg Val Val Asp Arg
                20                  25                  30
Gln Ile Arg Asp Ile Gln Arg Glu Glu Glu Lys Val Lys Arg Ser Val
            35                  40                  45
Lys Asp Ala Ala Lys Lys Gly Gln Lys Asp Val Cys Ile Val Leu Ala
        50                  55                  60
Lys Glu Met Ile Arg Ser Arg Lys Ala Val Ser Lys Leu Tyr Ala Ser
65                  70                  75                  80
Lys Ala His Met Asn Ser Val Leu Met Gly Met Lys Asn Gln Leu Ala
                85                  90                  95
Val Leu Arg Val Ala Gly Ser Leu Gln Lys Ser Thr Glu Val Met Lys
            100                 105                 110
Ala Met Gln Ser Leu Val Lys Ile Pro Glu Ile Gln Ala Thr Met Arg
        115                 120                 125
Glu Leu Ser Lys Glu Met Met Lys Ala Gly Ile Ile Glu Glu Met Leu
        130                 135                 140
Glu Asp Thr Phe Glu Ser Met Asp Asp Gln Glu Glu Met Glu Glu Glu
145                 150                 155                 160
Ala Glu Met Glu Ile Asp Arg Ile Leu Phe Glu Ile Thr Ala Gly Ala
                165                 170                 175
Leu Gly Lys Ala Pro Ser Lys Val Thr Asp Ala Leu Pro Glu Pro Glu
            180                 185                 190
Pro Pro Gly Ala Met Ala Ala Ser Glu Asp Glu Glu Glu Glu Glu Glu
            195                 200                 205
Ala Leu Glu Ala Met Gln Ser Arg Leu Ala Thr Leu Arg Ser
    210                 215                 220
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<210> 5965
<211> 1011
<212> DNA
<213> Homo sapiens

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<400> 5965
gggaacgggt cttgtggctt tgtctcccgc gaagaggaga tggcggagtc gttgaggtct
60
ccgcgccgct ccctgtacaa actggtgggc tcgccgcctt ggaaagaggc tttccggcag
120
agatgcctgg agagaatgag aaacagccgg gacaggctcc taaacaggta ccgccaggct
180
ggaagcagtg ggccagggaa ttctcagaac agctttctag ttcaagaggt gatggaagaa
240
gagtggaatg ctttgcagnn tcagtggnag aattgtccag aagacttggc tcagttggag
300
gagctgatag acatggctgt gctggaggaa attcaacagg agctgatcaa ccaagagcag
360
tccatcatca gcgagtatga gaagagcttg cagtttgatg aaaagtgtct cagcatcatg
420
ctggctgagt gggaggcaaa cccactcatc tgtcctgtat gtacaaagta caacctgaga
480
atcacaagcg gtgtggtggt gtgtcagtgt ggcctgtcca tcccatctca ttcttctgag
540
ttgacagagc agaagcttcg tgcctgttta gagggtagta taaatgagca cagtgcacat
600
tgtccccaca cacctgaatt ttcagtcact ggaggaacag aagaaaagtc cagtcttctc
660
atgagctgtc tggcctgtga tacttgggct gtgatcctct agagccagct tggactcaca
720
tcattctatg gggttgaaga caactcattc cctctgagga gccttgtaca tacaagcctt
780
ttatttataa cttattttgt attgaaactt ttaaacaata ctgaagaaaa aaaaactttt
840
ccgacatctg ttcttggtct tttgtgacgc aggttgaagg gggaggaata gaaaaagaca
900
aactgccttg gaggagataa accaatttta tgtctatcat gttatacaaa aatctagaaa
960
taatagattt gtacagaaaa aaatgataat aaatgagaac acaaaacata t
1011

<210> 5966
<211> 233
<212> PRT
<213> Homo sapiens

<400> 5966
Gly Asn Gly Ser Cys Gly Phe Val Ser Arg Glu Glu Glu Met Ala Glu
1               5                   10                  15
Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val Gly Ser Pro
            20                  25                  30
Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg Met Arg Asn
        35                  40                  45
Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly Ser Ser Gly
        50                  55                  60
Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val Met Glu Glu
65                  70                  75                  80
Glu Trp Asn Ala Leu Gln Xaa Gln Trp Xaa Asn Cys Pro Glu Asp Leu
```

```
                    85                      90                      95
Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu Glu Glu Ile Gln
                100                     105                     110
Gln Glu Leu Ile Asn Gln Glu Gln Ser Ile Ile Ser Glu Tyr Glu Lys
            115                     120                     125
Ser Leu Gln Phe Asp Glu Lys Cys Leu Ser Ile Met Leu Ala Glu Trp
        130                     135                     140
Glu Ala Asn Pro Leu Ile Cys Pro Val Cys Thr Lys Tyr Asn Leu Arg
145                     150                     155                     160
Ile Thr Ser Gly Val Val Val Cys Gln Cys Gly Leu Ser Ile Pro Ser
                165                     170                     175
His Ser Ser Glu Leu Thr Glu Gln Lys Leu Arg Ala Cys Leu Glu Gly
            180                     185                     190
Ser Ile Asn Glu His Ser Ala His Cys Pro His Thr Pro Glu Phe Ser
        195                     200                     205
Val Thr Gly Gly Thr Glu Glu Lys Ser Ser Leu Leu Met Ser Cys Leu
    210                     215                     220
Ala Cys Asp Thr Trp Ala Val Ile Leu
225                     230
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<210> 5967
<211> 1806
<212> DNA
<213> Homo sapiens

<400> 5967

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gtcttttgcc tccagtggat cagtgatttt tcagcagaaa atctttcctc tccattgctt
120
tgtgcttttg ttgctaggca gtcaacagca gggctactaa agcacttcta atttagacaa
180
atcttttcct ctatttttaga aatggatttc aatggtgttc agtttgtttg cagaaaccta
240
ctgaaagtga gcatgttttt gaacacatta acaccgaagt tctacgtggc cctaacaggc
300
acttcctcac taatatcagg gcttattttg atatttgaat ggtggtattt tcgcaaatac
360
ggaacttcat tcattgaaca agtctcagta agccacttgc gcccccttct gggaggggtt
420
gacaacaact cttccaacaa ttctaattcc agtaacgggg actcagattc caataggcaa
480
agtgtctcag aatgcaaagt atggcgaaat ccactaaatt tatttagggg tgctgaatac
540
aatcggtata cttgggtgac aggacgagag cctcttactt actatgacat gaatctctct
600
gcccaagacc accagacatt ctttacttgt gactcggacc atctgcgtcc cgcagatgca
660
ataatgcaga aagcctggag agagagaaac ccccaagcta ggatttctgc agctcatgaa
720
gccttggaga taaatgagac gagacaccaa tgtcttggtg tacatcaaaa gaaggctagc
780
aatgtgtgcc agaagactcg ggaggaccag ggaagcaaag cccttctgga actacaagca
840
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tatgctgatg ttcaggcagt cttagcaaag tatgatgata taagcttacc aaagtcagca
900
acaatatgct acacagctgc tttgctcaaa gcaagagctg tctctgacaa attctctcct
960
gaggctgcat ctcggcgggg gctgagcaca gcagagatga atgcagtaga ggccattcat
1020
agagctgtgg aattcaatcc tcatgtgcca aaatacctac tagaaatgaa aagcttaatc
1080
ctaccccag aacatatcct gaagagagga gacagtgaag caatagcata tgcattcttt
1140
catcttgcac actggaagag agtggaaggg gctttgaatc ttttgcattg tacgtgggaa
1200
ggcactttc ggatgatccc ttatcccttg gaaaagggc acctatttta tccttaccca
1260
atctgtacag aaacagcaga ccgagagctg cttccatctt tccatgaagt ctcagtttac
1320
ccaaagaagg agcttccctt ctttattctc tttactgctg gattatgttc cttcacagcc
1380
atgctggccc tcctgacaca tcagttcccg gaacttatgg gggtcttcgc aaaagctgtg
1440
agtgtttgcc tagagggagg ccttggggaa tggatgggga aagccaaggg cataaaagca
1500
gcgtgagaga aatggggttg ccttacagaa atgggtacga gcctgcaaag atcattgctc
1560
accatttaat tttcatgatc gtcaatggaa tcaaagcatt aagggtcaaa tgagaaagtg
1620
caggttgtta ctgcatgcct tgcctcattt cacaacaaat tcttagcagt ttccaaaaaa
1680
tgcaggaggt ccaaaaggat ggaatgattt aggaaatcct agcaaatgaa aatgtgtggg
1740
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1800
ctttcc
1806


<210> 5968
<211> 434
<212> PRT
<213> Homo sapiens

<400> 5968
Met Asp Phe Asn Gly Val Gln Phe Val Cys Arg Asn Leu Leu Lys Val
1                5               10                  15
Ser Met Phe Leu Asn Thr Leu Thr Pro Lys Phe Tyr Val Ala Leu Thr
            20              25                  30
Gly Thr Ser Ser Leu Ile Ser Gly Leu Ile Leu Ile Phe Glu Trp Trp
        35              40                  45
Tyr Phe Arg Lys Tyr Gly Thr Ser Phe Ile Glu Gln Val Ser Val Ser
    50              55                  60
His Leu Arg Pro Leu Leu Gly Gly Val Asp Asn Asn Ser Ser Asn Asn
65              70              75                      80
Ser Asn Ser Ser Asn Gly Asp Ser Asp Ser Asn Arg Gln Ser Val Ser
            85              90                  95
Glu Cys Lys Val Trp Arg Asn Pro Leu Asn Leu Phe Arg Gly Ala Glu
```

```
                    100                   105                   110
Tyr Asn Arg Tyr Thr Trp Val Thr Gly Arg Glu Pro Leu Thr Tyr Tyr
        115                   120                   125
Asp Met Asn Leu Ser Ala Gln Asp His Gln Thr Phe Phe Thr Cys Asp
    130                   135                   140
Ser Asp His Leu Arg Pro Ala Asp Ala Ile Met Gln Lys Ala Trp Arg
145                   150                   155                   160
Glu Arg Asn Pro Gln Ala Arg Ile Ser Ala Ala His Glu Ala Leu Glu
                165                   170                   175
Ile Asn Glu Thr Arg His Gln Cys Leu Gly Val His Gln Lys Lys Ala
                180                   185                   190
Ser Asn Val Cys Gln Lys Thr Arg Glu Asp Gln Gly Ser Lys Ala Leu
        195                   200                   205
Leu Glu Leu Gln Ala Tyr Ala Asp Val Gln Ala Val Leu Ala Lys Tyr
        210                   215                   220
Asp Asp Ile Ser Leu Pro Lys Ser Ala Thr Ile Cys Tyr Thr Ala Ala
225                   230                   235                   240
Leu Leu Lys Ala Arg Ala Val Ser Asp Lys Phe Ser Pro Glu Ala Ala
            245                   250                   255
Ser Arg Arg Gly Leu Ser Thr Ala Glu Met Asn Ala Val Glu Ala Ile
            260                   265                   270
His Arg Ala Val Glu Phe Asn Pro His Val Pro Lys Tyr Leu Leu Glu
        275                   280                   285
Met Lys Ser Leu Ile Leu Pro Pro Glu His Ile Leu Lys Arg Gly Asp
        290                   295                   300
Ser Glu Ala Ile Ala Tyr Ala Phe Phe His Leu Ala His Trp Lys Arg
305                   310                   315                   320
Val Glu Gly Ala Leu Asn Leu Leu His Cys Thr Trp Glu Gly Thr Phe
                325                   330                   335
Arg Met Ile Pro Tyr Pro Leu Glu Lys Gly His Leu Phe Tyr Pro Tyr
            340                   345                   350
Pro Ile Cys Thr Glu Thr Ala Asp Arg Glu Leu Leu Pro Ser Phe His
    355                   360                   365
Glu Val Ser Val Tyr Pro Lys Lys Glu Leu Pro Phe Phe Ile Leu Phe
    370                   375                   380
Thr Ala Gly Leu Cys Ser Phe Thr Ala Met Leu Ala Leu Leu Thr His
385                   390                   395                   400
Gln Phe Pro Glu Leu Met Gly Val Phe Ala Lys Ala Val Ser Val Cys
                405                   410                   415
Leu Glu Gly Gly Leu Gly Glu Trp Met Gly Lys Ala Lys Gly Ile Lys
            420                   425                   430
Ala Ala
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<210> 5969
<211> 429
<212> DNA
<213> Homo sapiens

<400> 5969
cggccgcccg tgtgtgacgt cagggagctg caggcccagg aagccttgca gaacggccag
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ctgggcggcg gggaaggggt cccggatctg cagcctgggg tcttggccag ccaggccatg
120

attgagaaga tcctgagcga ggaccccgg tggcaagatg ccaacttcgt gctgggcagc
180
tacaagacgg agcagtgccc gaagccgcca cgcctgtgcc gccagggcta tgcgtgccca
240
cactaccaca atagccggga caggcggcgc aaccccggc ggttccagta caggtccacg
300
ccctgcccca gcgtgaagca cggggatgag tggggggaac cctcacgctg cgatggcggc
360
gacggctgcc agtattgcca ctcccgcacg gagcagcagt tccatcccga gatctacaaa
420
tctacaaaa
429

<210> 5970
<211> 143
<212> PRT
<213> Homo sapiens

<400> 5970
Arg Pro Pro Val Cys Asp Val Arg Glu Leu Gln Ala Gln Glu Ala Leu
 1   5   10   15
Gln Asn Gly Gln Leu Gly Gly Gly Gly Val Pro Asp Leu Gln Pro
            20   25   30
Gly Val Leu Ala Ser Gln Ala Met Ile Glu Lys Ile Leu Ser Glu Asp
            35   40   45
Pro Arg Trp Gln Asp Ala Asn Phe Val Leu Gly Ser Tyr Lys Thr Glu
    50   55   60
Gln Cys Pro Lys Pro Pro Arg Leu Cys Arg Gln Gly Tyr Ala Cys Pro
65   70   75   80
His Tyr His Asn Ser Arg Asp Arg Arg Arg Asn Pro Arg Arg Phe Gln
                85   90   95
Tyr Arg Ser Thr Pro Cys Pro Ser Val Lys His Gly Asp Glu Trp Gly
            100   105   110
Glu Pro Ser Arg Cys Asp Gly Gly Asp Gly Cys Gln Tyr Cys His Ser
            115   120   125
Arg Thr Glu Gln Gln Phe His Pro Glu Ile Tyr Lys Ser Thr Lys
    130   135   140

<210> 5971
<211> 565
<212> DNA
<213> Homo sapiens

<400> 5971
gcgcgcccat ttcggagagt tccctcagcc ccaggactct ggatgtagcc gttttcatgc
60
tgtgaatagc acagtcttcc ctttcatgtg gcactgaagt taaaatgcat agagctcttt
120
catgtccctt aggtcagcta agcccacatc agtgtccaaa taggcaacat ccctatttta
180
tagatggtca tccccatttt agagatagct cccttttata tccccatttt acaggtgaag
240
gaattgaggc acagaaggtt aggtcacttc tgcaagatga ccagctgaac caaaatttca
300

gggcttcaaa caccaaatgt gttcctttgt cttccgtttc ccacttgctt cccagaggct
360
cagcaagtag cctctggcca ctgagcatcc tcccgcccac tttgctccct gcctcctgat
420
cccaggactg tggccgtgga tgccagagcg aggatgtgaa tcctgttggg ttctgaagcc
480
cacacctacc ctcagccttg aagctgcagc aatggctgct tccagatgag cacaccctcg
540
gggtgcangc gtccagtgtc acgat
565

<210> 5972
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5972
Met His Arg Ala Leu Ser Cys Pro Leu Gly Gln Leu Ser Pro His Gln
1   5   10   15
Cys Pro Asn Arg Gln His Pro Tyr Phe Ile Asp Gly His Pro His Phe
            20   25   30
Arg Asp Ser Ser Leu Leu Tyr Pro His Phe Thr Gly Glu Gly Ile Glu
        35   40   45
Ala Gln Lys Val Arg Ser Leu Leu Gln Asp Asp Gln Leu Asn Gln Asn
    50   55   60
Phe Arg Ala Ser Asn Thr Lys Cys Val Pro Leu Ser Ser Val Ser His
65   70   75   80
Leu Leu Pro Arg Gly Ser Ala Ser Ser Leu Trp Pro Leu Ser Ile Leu
                85   90   95
Pro Pro Thr Leu Leu Pro Ala Ser
            100

<210> 5973
<211> 797
<212> DNA
<213> Homo sapiens

<400> 5973
gggcccaggg gcggctttcc caacactggt cgcagtcatt gttggtataa cggctagaga
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cgcccagtga gttagcatgg agggcagtgg gaccggaaaa agacgtggaa aagctgcgaa
120
aacgagcctt cgaatcatgg acgcgcgggc ccagctcctc ctccgagttc ctcatccggg
180
gccgtcactc acatccgggg ccctcactca catccgggac cctcatccgg ggctctcacc
240
cacatccggg accctcatgc ctgggcggag gagggggggc ccttcattcg ggacccctgc
300
actccgtcgc cggaagtgcc accgagaagc gccggcctcg gggctgtcta cagcggcccg
360
ggagaggctg tggtggcccc gagcgcgagt gtgtaggtga caggacagcg gccaggcccg
420
cccctcccct cggtgagtac ccggaagccg ttttggggtc gcagcggggt ggcagcttgt
480

tttgccttca cgggagtaga aggaggcggc gtccgccgcg gccgacggta gttcgcttcc
540
ccgagagtgc gcggaggccc gggtgcgagg agggcctgtt tctcttcagc cctggttcat
600
tcacctcgcg gaccgagggc ccgccgtcag gagccggcga ccgtgccctg gtgcgagctg
660
gtctgtatgt cctcactggt ccttttggga ctttgccttg gcctcgttgc tctcaggatt
720
ccgggaaaag gccggtctag ctggtctgag ttagcgaagg gcctgacccc aaaagtggat
780
tttcctcgtt ccgaatt
797

<210> 5974
<211> 107
<212> PRT
<213> Homo sapiens

<400> 5974
Met Glu Gly Ser Gly Thr Gly Lys Arg Arg Gly Lys Ala Ala Lys Thr
 1   5   10   15
Ser Leu Arg Ile Met Asp Ala Arg Ala Gln Leu Leu Leu Arg Val Pro
                20   25   30
His Pro Gly Pro Ser Leu Thr Ser Gly Ala Leu Thr His Ile Arg Asp
            35   40   45
Pro His Pro Gly Leu Ser Pro Thr Ser Gly Thr Leu Met Pro Gly Arg
        50   55   60
Arg Arg Gly Gly Pro Ser Phe Gly Thr Pro Ala Leu Arg Arg Arg Lys
65   70   75   80
Cys His Arg Glu Ala Pro Ala Ser Gly Leu Ser Thr Ala Ala Arg Glu
                85   90   95
Arg Leu Trp Trp Pro Arg Ala Arg Val Cys Arg
            100   105

<210> 5975
<211> 2175
<212> DNA
<213> Homo sapiens

<400> 5975
nntcaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
60
gatgccatcc gggtcttcgc caacatcctc tctacatcc agaggaccaa gagcatgttc
120
cagagggcca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
180
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
240
cgggagaaat atggggacaa gatgttgcgc atgtcttatc ccgctgatga ttatgagtct
300
gaggcggctt atgaccccta cgcttatccc agcgactatg atatgcacac aggagatcca
360
aagcaggacc ttgcttatga acgtcagtat gaacagcaaa cctatcaggt gatccctgag
420

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gtgatcaaaa acttcatcca gtatttccac aaaactgtct cagatttgat tgaccagaaa
480
gtgtatgagc tacaggccag tcgtgtctcc agtgatgtca ttgaccagaa ggtgtatgag
540
atccaggaca tctatgagaa cagctggacc aagctgactg aaagattctt caagaataca
600
ccttggcccg aggctgaagc cattgctcca caggttggca atgatgctgt cttcctgatt
660
ttatacaaag aattatacta caggcacata tatgccaaag tcagtggggg accttccttg
720
gagcagaggt ttgaatccta ttacaactac tgcaatctct tcaactacat tcttaatgcc
780
gatggtcctg ctccccttga actacccaac cagtggctct gggatattat cgatgagttc
840
atctaccagt ttcagtcatt cagtcagtac cgctgtaaga ctgccaagaa gtcagaggag
900
gagattgact ttcttcgttc caatcccaaa atctggaatg ttcatagtgt cctcaatgtc
960
cttcattccc tggtagacaa atccaacatc aaccgacagt tggaggtata cacaagcgga
1020
ggtgaccctg agagtgtggc tggggagtat gggcggcact ccctctacaa aatgcttggt
1080
tacttcagcc tggtcgggct tctccgcctg cactccctgt taggagatta ctaccaggcc
1140
atcaaggtgc tggagaacat cgaactgaac aagaagagta tgtattcccg tgtgccagag
1200
tgccaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
1260
gatgccatcc gggtcttcgc caacatcctc tctacatcc agaggaccaa gagcatgttc
1320
cagaggacca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
1380
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
1440
cgggagaaat atggggacaa gatgttgcgc atgcagaaag gtgacccaca agtctatgaa
1500
gaacttttca gttactcctg ccccaagttc ctgtcgcctg tagtgcccaa ctatgataat
1560
gtgcacccca actaccacaa agagcccttc ctgcagcagc tgaaggtgtt ttctgatgaa
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1680
cctgtggcca agctggctgg cttcctggac ctcacagagc aggagttccg gatccagctt
1740
cttgtcttca aacacaagat gaagaacctc gtgtggacca gcggtatctc agccctggat
1800
ggtgaatttc agtcagcctc agaggttgac ttctacattg ataaggacat gatccacatc
1860
gcggacacca aggtcgccag gcgttatggg gatttcttca tccgtcagat ccacaaattt
1920
gaggagctta atcgaaccct gaagaagatg ggacagagac cttgatgata ttcacacaca
1980
ttcaggaacc tgttttgatg tattataggc aggaagtgtt tttgctaccg tgaaacccttt
2040
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acctagatca gccatcagcc tgtcaactca gttaacaagt taaggaccga agtgtttcaa
2100
gtggatctca gtaaggatc tttggagcca gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2160
aaaaaaaaaa aaaaa
2175

<210> 5976
<211> 564
<212> PRT
<213> Homo sapiens

<400> 5976
Met Ser Tyr Pro Ala Asp Asp Tyr Glu Ser Glu Ala Ala Tyr Asp Pro
 1   5   10   15
Tyr Ala Tyr Pro Ser Asp Tyr Asp Met His Thr Gly Asp Pro Lys Gln
            20   25   30
Asp Leu Ala Tyr Glu Arg Gln Tyr Glu Gln Gln Thr Tyr Gln Val Ile
        35   40   45
Pro Glu Val Ile Lys Asn Phe Ile Gln Tyr Phe His Lys Thr Val Ser
    50   55   60
Asp Leu Ile Asp Gln Lys Val Tyr Glu Leu Gln Ala Ser Arg Val Ser
65   70   75   80
Ser Asp Val Ile Asp Gln Lys Val Tyr Glu Ile Gln Asp Ile Tyr Glu
                85   90   95
Asn Ser Trp Thr Lys Leu Thr Glu Arg Phe Phe Lys Asn Thr Pro Trp
            100   105   110
Pro Glu Ala Glu Ala Ile Ala Pro Gln Val Gly Asn Asp Ala Val Phe
        115   120   125
Leu Ile Leu Tyr Lys Glu Leu Tyr Tyr Arg His Ile Tyr Ala Lys Val
    130   135   140
Ser Gly Gly Pro Ser Leu Glu Gln Arg Phe Glu Ser Tyr Tyr Asn Tyr
145   150   155   160
Cys Asn Leu Phe Asn Tyr Ile Leu Asn Ala Asp Gly Pro Ala Pro Leu
            165   -170   175
Glu Leu Pro Asn Gln Trp Leu Trp Asp Ile Ile Asp Glu Phe Ile Tyr
            180   185   190
Gln Phe Gln Ser Phe Ser Gln Tyr Arg Cys Lys Thr Ala Lys Lys Ser
        195   200   205
Glu Glu Glu Ile Asp Phe Leu Arg Ser Asn Pro Lys Ile Trp Asn Val
    210   215   220
His Ser Val Leu Asn Val Leu His Ser Leu Val Asp Lys Ser Asn Ile
225   230   235   240
Asn Arg Gln Leu Glu Val Tyr Thr Ser Gly Gly Asp Pro Glu Ser Val
            245   250   255
Ala Gly Glu Tyr Gly Arg His Ser Leu Tyr Lys Met Leu Gly Tyr Phe
            260   265   270
Ser Leu Val Gly Leu Leu Arg Leu His Ser Leu Leu Gly Asp Tyr Tyr
        275   280   285
Gln Ala Ile Lys Val Leu Glu Asn Ile Glu Leu Asn Lys Lys Ser Met
        290   295   300
Tyr Ser Arg Val Pro Glu Cys Gln Val Thr Thr Tyr Tyr Tyr Val Gly
305   310   315   320
Phe Ala Tyr Leu Met Met Arg Arg Tyr Gln Asp Ala Ile Arg Val Phe

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                    325                    330                    335
Ala Asn Ile Leu Leu Tyr Ile Gln Arg Thr Lys Ser Met Phe Gln Arg
                340                    345                    350
Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His
            355                    360                    365
Ala Leu Leu Ala Ile Ala Leu Thr Met Tyr Pro Met Arg Ile Asp Glu
        370                    375                    380
Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg
385                    390                    395                    400
Met Gln Lys Gly Asp Pro Gln Val Tyr Glu Glu Leu Phe Ser Tyr Ser
                405                    410                    415
Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His
                420                    425                    430
Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser
            435                    440                    445
Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu
        450                    455                    460
Lys Leu Tyr Thr Thr Met Pro Val Ala Lys Leu Ala Gly Phe Leu Asp
465                    470                    475                    480
Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys
                485                    490                    495
Met Lys Asn Leu Val Trp Thr Ser Gly Ile Ser Ala Leu Asp Gly Glu
                500                    505                    510
Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile
            515                    520                    525
His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile
        530                    535                    540
Arg Gln Ile His Lys Phe Glu Glu Leu Asn Arg Thr Leu Lys Lys Met
545                    550                    555                    560
Gly Gln Arg Pro
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<210> 5977
<211> 2320
<212> DNA
<213> Homo sapiens

<400> 5977
naactttctt tagatttgtc tttgcttttt ccaacttcct ttatttctat tatacttata
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attttgcttt ttgccctatc tttcattaga aacttttcgc aaatgtctgt taaatgctac
120
cccagtgact ttgggcttgg tcatgctact tgctttggtc aatgaaatgt gagtagacat
180
caagtatacc accatcacac agaaatttta tttttttattt tatttttttat agagacaggg
240
tctcactaca ttgcctagat tggtctcaaa ctcctgggct caagcaatct tcctcttctt
300
ggcctcccaa agtgttggga ttgcaggtgt gcgccactac gcccagcttg aaaaattttt
360
taatgcatgt ggtaatccac aggagatcac atttagtata tgaccaagtt aattaagaag
420
tcaaaaaaca cgttaaattt aagcagaata aggctgggtt cggtggctca tgcctgtgat
480
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cccagcactt tgggaggcag aggtgggcag atcattnagg ccaggagttc gagaccagcc
540
tggacaacat ggcganaagt ctttactaaa aatacaaaaa tcagctgggc gtggtggtac
600
acacccgtga tcccagctac tcaggaggct taggcacatg atncgcttga acctgggaga
660
tggaagctgc agtaagctag atcctgccac tgtactccag cctgggtgac agatcaagac
720
tctaactaaa aaacccccca aaaaacaaat agttacttgg aaaacttccg acatttattt
780
acttctggac aaacaaatga gtgggaagaa tcaagtatac acctcttaat tgtatttttt
840
tttttttttg agacagagtc ttgctctgtc gcccaggctg gagtacagtg gacgatctca
900
gctcactgca acctttgcct cccgggttca ggtgattctc ctgcctcagc ctcccgagta
960
gccgggatta taggcatgga gaaccacacc tggctagttt ttgtattttt agtagagatg
1020
aagtttcacc atgttggcct ggctggtctc aaactcctga cctcaagtga tctgcccgcc
1080
tggtctccta aagtgttggg attacaggcg tgagccaccg tgcctggcca atgttagttt
1140
ttatccttaa aattgcctga gttcttagaa cacagaaaaa acaaatttga atgcattttt
1200
aacagcttaa taatttatat gtcccattat gattttagcg gaatgtttta aagcaaagca
1260
taattcactg caaagataaa cctgaaaaag caaacaaact tacaaatggt atgttatgac
1320
ctagacaaaa ctgattatca actagtaata ctcataatta gcacatgcaa cagattgaga
1380
aattaaatcc tgtgctatat actcttaagt attttgtcag atatatcttt aaatgttcta
1440
tcaattgcat tcctttccac acatatttta aacaagaaaa caattgtctt tcctccagat
1500
tctcatgttt atcagtgcaa aacgttgcaa tctcagtaaa aatggtttat tacaatgtta
1560
ttttagaaag gcttagtcct caaactgttg aaaatgtact taaaagatgt ccaaatcatg
1620
agaatgatca acttcaatgg cttcctctgc ctccaacttg gcttctgcat gtccttcctg
1680
tgactcatca agagaggcca aggcctcatt cgtgtcactt gcaaaagttt ctcgtgatgt
1740
atcatcatct tcttgaaaat ttagactttt aatagcttgt ttcatctttt tccccaacac
1800
ttgtgttctc ctcttcctag cagctttttt attttcatat tccttttggt tttcaatgta
1860
gaaaatgtcc ttaatttgtt cctcgctgat actaggagtg tttttcaaga gattcagaaa
1920
aactccacct ggtgttcttc ttcgactacc attcattata aagagaccac cattttgttc
1980
aacttcagcg gtttccatca gaagttcaat tgcctttttg ttaccaataa tcctcactac
2040
tcgggctatc aggtctttct ttggttcctg taacctgaat gaaatttcat cagccacttt
2100
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ctcttgagaa tcttccgctg tgatctcgta tcgaccttta tagttcattt ctggtctgtt
2160
ccctagcctg tctttgacag gtcgtttcct tttgagatga ccttgcccat tttcctcttc
2220
ctttgatccc attttttgc caccatgcat atattcatct agttccttgt ctagatcctt
2280
tgtatgctct tgagattcct tcctaagttt cttggcaagc
2320


<210> 5978
<211> 77
<212> PRT
<213> Homo sapiens

<400> 5978
Met Thr Lys Leu Ile Lys Lys Ser Lys Asn Thr Leu Asn Leu Ser Arg
1               5                  10                  15
Ile Arg Leu Gly Ser Val Ala His Ala Cys Asp Pro Ser Thr Leu Gly
            20                  25                  30
Gly Arg Gly Gly Gln Ile Ile Xaa Ala Arg Ser Ser Arg Pro Ala Trp
         35                  40                  45
Thr Thr Trp Arg Xaa Val Phe Thr Lys Asn Thr Lys Ile Ser Trp Ala
      50                  55                  60
Trp Trp Tyr Thr Pro Val Ile Pro Ala Thr Gln Glu Ala
65                  70                  75


<210> 5979
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 5979
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60
ctcggctcac tgtagccttg acctcctggg ctcaagcgat ctccgcctca gcctcccgag
120
tagctgcgac cacaggcctg tgcagcactc ctggcttgct gcccattgta tagatgagga
180
aattgaggcc taaggcaggg tcacttgcct ggccccttcc ccttcacccg tcagagtcca
240
gacagggagg ggacgtcccc tgaccccgc tgctctgtgc tttcagggca agaagactat
300
gaccggctgc ggcccctgtc ctaccagaac acccacctcg tgctcatctg ctatgacgtc
360
atgaatccca ccagctacga caacgtcctc atcaagtggt tccctgaggt cacgcatttc
420
tgccgcggga tccccatggt gctcatcggc tgcaagacag acctgaggaa ggacaaggag
480
cagctgcgga agctccgggc cgcccagctg agcccatca cctacatgca gggcctgagc
540
gcctgcgaac agatccgagc tgctctctac ctggaatgtt ccgccaagtt tcgggagaat
600
gtggaggacg tcttccggga ggccgccaag gtggctctca gcgctctgaa gaaggcgcaa
660
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cggcagaaga agcgccggct ctgcctgctg ctctgaccca gggcagacag acctcacgac
720
agcactgaca gggcccgggg gcccaggtgc cgattgcacc agggaggctg ccccatcccg
780
accctccagc tcatggtgtc tggggcctgc ggctagactc ttggaacatt ctggaactct
840
ctcctttcct ggctggggct ctgaccacaa actcccctcc aggctgcccc tgggacatgg
900
tggtgatgtg ggtgcaggag ccagtgtctg ttgttgggac tcgcaagtgc cctcatcaca
960
gccacccca ccacgagtgt ctccccagtg cagactcaag ttatgcttga aatgaaaaag
1020
tctatctggt agtgggtaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1080
aaaaaaaaaa aaaaa
1095

<210> 5980
<211> 169
<212> PRT
<213> Homo sapiens

<400> 5980
Gly Leu Arg Gln Gly His Leu Pro Gly Pro Phe Pro Phe Thr Arg Gln
1   5   10   15
Ser Pro Asp Arg Glu Gly Thr Ser Pro Asp Pro Arg Cys Ser Val Leu
                20   25   30
Ser Gly Gln Glu Asp Tyr Asp Arg Leu Arg Pro Leu Ser Tyr Gln Asn
            35   40   45
Thr His Leu Val Leu Ile Cys Tyr Asp Val Met Asn Pro Thr Ser Tyr
        50   55   60
Asp Asn Val Leu Ile Lys Trp Phe Pro Glu Val Thr His Phe Cys Arg
65   70   75   80
Gly Ile Pro Met Val Leu Ile Gly Cys Lys Thr Asp Leu Arg Lys Asp
                85   90   95
Lys Glu Gln Leu Arg Lys Leu Arg Ala Ala Gln Leu Glu Pro Ile Thr
            100   105   110
Tyr Met Gln Gly Leu Ser Ala Cys Glu Gln Ile Arg Ala Ala Leu Tyr
        115   120   125
Leu Glu Cys Ser Ala Lys Phe Arg Glu Asn Val Glu Asp Val Phe Arg
    130   135   140
Glu Ala Ala Lys Val Ala Leu Ser Ala Leu Lys Lys Ala Gln Arg Gln
145   150   155   160
Lys Lys Arg Arg Leu Cys Leu Leu Leu
                165

<210> 5981
<211> 677
<212> DNA
<213> Homo sapiens

<400> 5981
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60

5155

gttctggggt gtagacgctg ctggccagcc ctccccagcc gaggttctcg gcaccgcctt
120

gagagcttca gctgccccag ggtgtgcagg tttgctttag agggtcggcg ggcggagctt
180

cggggaagag gagctctggg agagtcattc cggccagtgc gagtaccgtc gtcgctcttg
240

ggaatccttg gccgcccaga cagaagggaa gtaggcgccg agacccgtt ctgcattttg
300

attcatctcg ggccctgtaa gggtcatatc ttgtgaaaat aacctgtaaa atcaatttaa
360

cgttcagtgc agcgtgtaaa gacagctcta agaatttaaa agacgcctga gtcagaacat
420

ttaaatgctt gggtccctgt agcagcgttt taacacgtct gagtgcagag ggtggagaat
480

cgagcctgat tgccgttcac gccctgtaac ctttaagaag ggtaaagaaa ggcaccctaa
540

aaaacgcaag gggacactta ccctaggggt ggacgaacag ctagcttttt ggaatttggg
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ttggtcttca tttccaagtg cgaaatttgc ctgcaaaact ttttatttgc agtcatagat
660

caacgataaa cagaatt
677

<210> 5982
<211> 98
<212> PRT
<213> Homo sapiens

<400> 5982
Met Gln Asn Gly Ser Pro Ala Pro Thr Ser Leu Leu Ser Gly Arg Pro
 1   5   10   15
Arg Ile Pro Lys Ser Asp Asp Gly Thr Arg Thr Gly Arg Asn Asp Ser
            20   25   30
Pro Arg Ala Pro Leu Pro Arg Ser Ser Ala Arg Arg Pro Ser Lys Ala
        35   40   45
Asn Leu His Thr Leu Gly Gln Leu Lys Leu Ser Arg Arg Cys Arg Glu
    50   55   60
Pro Arg Leu Gly Arg Ala Gly Gln Gln Arg Leu His Pro Arg Thr Arg
65   70   75   80
Pro Arg Arg Gly Ser Gly Pro Leu Val Arg Ala Gly Arg Arg Gly Trp
                85   90   95
Gly Lys

<210> 5983
<211> 790
<212> DNA
<213> Homo sapiens

<400> 5983
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tatagtcaag aggtaagaag ttaacttaaa aagggtgaat tggtagtttt tttcctatta
120

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cattgttttc cttaaattac tggtaaattt tgaaataaac agtcccaaga tgtgattatt
180
tgtgtaattt ttttttttaa tttgtaaaca gggatatgac agatcttcaa ccatgttaac
240
attggggcct tttagaaatt ctaatttaac tgaactgggt ctgcaagaaa taaagactat
300
tggttatacg agccctagga gtaggactga agtcaacagg cagtgtcctg gagaaaagga
360
acctgtgtca gaccttcagc taggactcga tgcagttgag ccaactgccc tacataaaac
420
cctggaaacg cctgcacatg acagggctga gcccaacagc caactggact cgactcactc
480
tggacggggc acaatgtatt cttcctgggt aaagagccct gacagaacag gagttaactt
540
ctcagtgaac tccaacttga gggacctgac accctcgcat cagttggagg ttggaggagg
600
cttccgaata agtgagtcaa agtgcctgat gcaggatgat actagaggca tgtttatgga
660
aacaactgtg ttttgtactt ccgaagatgg gcttgtatct ggtttcggac ggactgttaa
720
tgacaatttg atcgacggga attgcacacc ccagaatcca ccacaaaaga aaaggtttc
780
tctattagaa
790
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<210> 5984
<211> 186
<212> PRT
<213> Homo sapiens

<400> 5984
Met Leu Thr Leu Gly Pro Phe Arg Asn Ser Asn Leu Thr Glu Leu Gly
1               5                   10                  15
Leu Gln Glu Ile Lys Thr Ile Gly Tyr Thr Ser Pro Arg Ser Arg Thr
            20                  25                  30
Glu Val Asn Arg Gln Cys Pro Gly Glu Lys Glu Pro Val Ser Asp Leu
        35                  40                  45
Gln Leu Gly Leu Asp Ala Val Glu Pro Thr Ala Leu His Lys Thr Leu
    50                  55                  60
Glu Thr Pro Ala His Asp Arg Ala Glu Pro Asn Ser Gln Leu Asp Ser
65                  70                  75                  80
Thr His Ser Gly Arg Gly Thr Met Tyr Ser Ser Trp Val Lys Ser Pro
                85                  90                  95
Asp Arg Thr Gly Val Asn Phe Ser Val Asn Ser Asn Leu Arg Asp Leu
                100                 105                 110
Thr Pro Ser His Gln Leu Glu Val Gly Gly Gly Phe Arg Ile Ser Glu
            115                 120                 125
Ser Lys Cys Leu Met Gln Asp Asp Thr Arg Gly Met Phe Met Glu Thr
    130                 135                 140
Thr Val Phe Cys Thr Ser Glu Asp Gly Leu Val Ser Gly Phe Gly Arg
145                 150                 155                 160
Thr Val Asn Asp Asn Leu Ile Asp Gly Asn Cys Thr Pro Gln Asn Pro
                165                 170                 175
Pro Gln Lys Lys Lys Val Ser Leu Leu Glu
```

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            180                      185
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<210> 5985
<211> 737
<212> DNA
<213> Homo sapiens

<400> 5985
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120
gccgaggttc tcggcaccgc cttgagagct tcagctgccc cagggtgtgc agattagaat
180
cccaagaaaa tcaaatggca tccggggatt tctgctcacc tggagaaggg atggaaatac
240
ttcaacaagt gtgcagcaaa caacttcctc cttgtaacct gagtaaagag gacctgttac
300
agaacccata cttcagcaag cttctcctga atctctcaca gcatgtggat gagagtggct
360
taagcctcac cctagcaaag gagcaggctc aggcatggaa ggaagttcga ctgcataaga
420
caacatggtt gaggtctgag attttacaca gagtcattca agagttgctt gtggactact
480
atgtgaagat acaagacaca aatgtaactt ctgaggacaa aaagtttcat gagacccttg
540
aacagcggct gcttgtaact gaactgatgc ggctcttagg tcctagccag gagagggaga
600
tacctccact gctggggctg gagaaagcgg accttctgga actcatgcca ctctcagagg
660
ttggcgggga gatattggaa ccaaataaat gaaatggttt aatttctccc atatctttaa
720
aaaaaaaaaa aaaaaaa
737
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<210> 5986
<211> 165
<212> PRT
<213> Homo sapiens

<400> 5986
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Met Ala Ser Gly Asp Phe Cys Ser Pro Gly Glu Gly Met Glu Ile Leu
  1               5                  10                  15
Gln Gln Val Cys Ser Lys Gln Leu Pro Pro Cys Asn Leu Ser Lys Glu
             20                  25                  30
Asp Leu Leu Gln Asn Pro Tyr Phe Ser Lys Leu Leu Leu Asn Leu Ser
         35                  40                  45
Gln His Val Asp Glu Ser Gly Leu Ser Leu Thr Leu Ala Lys Glu Gln
     50                  55                  60
Ala Gln Ala Trp Lys Glu Val Arg Leu His Lys Thr Thr Trp Leu Arg
65                  70                  75                  80
Ser Glu Ile Leu His Arg Val Ile Gln Glu Leu Leu Val Asp Tyr Tyr
                 85                  90                  95
Val Lys Ile Gln Asp Thr Asn Val Thr Ser Glu Asp Lys Lys Phe His
```

```
                100                    105                    110
Glu Thr Leu Glu Gln Arg Leu Leu Val Thr Glu Leu Met Arg Leu Leu
        115                    120                    125
Gly Pro Ser Gln Glu Arg Glu Ile Pro Pro Leu Leu Gly Leu Glu Lys
    130                    135                    140
Ala Asp Leu Leu Glu Leu Met Pro Leu Ser Glu Val Gly Gly Glu Ile
145                    150                    155                    160
Leu Glu Pro Asn Lys
                165
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<210> 5987
<211> 1444
<212> DNA
<213> Homo sapiens

<400> 5987
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120
caccgcgtgg agctttacaa ggtgctgagt tcccttggtt accatgtggt cacctttgac
180
tacagaggtt ggggtgactc agtgggaacg ccatctgagc ggggcatgac ctatgacgca
240
ctccacgttt ttgactggat caaagcaaga agtggtgaca ccccgtgta catctggggc
300
cactctctgg gcactggcgt ggcgacaatc tggtgcggcg cctctgtgag cgagacgcct
360
ccagatgccc ttatattgga atctccattc actaatatcc gcgaagaagc taagagccat
420
ccattttcag tgatatatcg atacttccct gggtttgact ggttcttcct tgatcctatt
480
acaagtagtg gaattaaatt tgcaaatgat gaaaacgtga agcacatctc ctgtcccctg
540
ctcatcctgc acgctgagga cgacccggtg gtgcccttcc agcttggcag aaagctctat
600
agcatcgccg caccagctcg aagcttccga gatttcaaag ttcagtttgt gccctttcat
660
tcagaccttg gctacaggca caaatacatt tacaagagcc ctgagctgcc acggatactg
720
agggaattcc tggggaagtc ggagcctgag caccagcact gagcctggcc gtgggaagga
780
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840
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960
tggaaagcgt gggtggcagg catgtggctc tccttgccgc ccctcaacct gagatcttgt
1020
tgggagactt aatggcagca ggcagccatc actgcctgct tgatgctgca ctgagctgga
1080
cagggggagt ccgggcaggg gactcttggg gctcgggacc atgctgagct ttttggcacc
1140
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acccacagag aacgtggggt ccaggttctt tctgcacctt cccagcacat gcagaatgac
1200
tccagtggtt ccatcgtccc ctcctgccct gtgtacctgc ttgccttct cagctgcccc
1260
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1320
cctttcacct acctgtacac ctaacctggc cttagactga gctttatta agaataaaat
1380
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1440
aaaa
1444


<210> 5988
<211> 216
<212> PRT
<213> Homo sapiens

<400> 5988
Gly Gly Asp His Arg Val Glu Leu Tyr Lys Val Leu Ser Ser Leu Gly
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Tyr His Val Val Thr Phe Asp Tyr Arg Gly Trp Gly Asp Ser Val Gly
            20                  25                  30
Thr Pro Ser Glu Arg Gly Met Thr Tyr Asp Ala Leu His Val Phe Asp
        35                  40                  45
Trp Ile Lys Ala Arg Ser Gly Asp Asn Pro Val Tyr Ile Trp Gly His
    50                  55                  60
Ser Leu Gly Thr Gly Val Ala Thr Ile Trp Cys Gly Ala Ser Val Ser
65                  70                  75                  80
Glu Thr Pro Pro Asp Ala Leu Ile Leu Glu Ser Pro Phe Thr Asn Ile
                85                  90                  95
Arg Glu Glu Ala Lys Ser His Pro Phe Ser Val Ile Tyr Arg Tyr Phe
            100                 105                 110
Pro Gly Phe Asp Trp Phe Phe Leu Asp Pro Ile Thr Ser Ser Gly Ile
        115                 120                 125
Lys Phe Ala Asn Asp Glu Asn Val Lys His Ile Ser Cys Pro Leu Leu
    130                 135                 140
Ile Leu His Ala Glu Asp Asp Pro Val Val Pro Phe Gln Leu Gly Arg
145                 150                 155                 160
Lys Leu Tyr Ser Ile Ala Ala Pro Ala Arg Ser Phe Arg Asp Phe Lys
                165                 170                 175
Val Gln Phe Val Pro Phe His Ser Asp Leu Gly Tyr Arg His Lys Tyr
            180                 185                 190
Ile Tyr Lys Ser Pro Glu Leu Pro Arg Ile Leu Arg Glu Phe Leu Gly
        195                 200                 205
Lys Ser Glu Pro Glu His Gln His
    210                 215


<210> 5989
<211> 1583
<212> DNA
<213> Homo sapiens

<400> 5989

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acactccgaa catggccctt ttctcgttcc aacgatcaac cactttgggg ggcgggagag
120
tgagccttat accgatcaat ctaggcacac ctcctttcct gggggtgact gaatgcccag
180
ccagggacgc gacgtctctg gccagcagaa atacggcctc ctccccgccg actgggcaaa
240
gggggacagc aagtgtccca tcacccaccc atctcctgct tctactgtga gtgcgaggag
300
aagagactgt gcgtcaacac tcatgtatgg accaaaagca agttcatggg catgtccgtg
360
ggggtctcta tgatagggga aggtgtgttg aggctcctgg aacacgggga ggagtacgta
420
ttcaccctgc ctagtgccta cgcccggtcc attctcacca tcccgtgggt ggagctcgga
480
ggaaaagtca gcatcaactg tgccaagact gggtactcag cgacagtgat attccacacg
540
aagcctttct atggagggaa agtccacagg gttaccgcag aagtgaagca caacccaacc
600
aacaccattg tttgtaaagc ccatggggaa tggaatggta ctttagagtt cacctacaac
660
aatggagaaa ccaaagtcat cgacacaacc acactgccag tgtatcccaa gaagatcaga
720
cctcttgaga agcagggacc catggagtcc aggaacctct ggcgggaggt gacccgatac
780
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840
cgggtggagg aacggaagcg cgagaacctc cgcacaccat ggaagcccaa atattttatc
900
caggagggcg atggctgggt atacttcaat cccctctgga aagcacactg atggggtgga
960
ggtgcagagc tttccagtat agccctgttt ttgtaggaat attaaagtag tagagtatca
1020
gggtttttgtt ggcattcact gagaccttgt attagcatcc aagaaatgat gagagagaga
1080
gaaattatat actatgaaaa gtgcaccccc acactctgct agaggaatga atttattcaa
1140
gagccattcg gggcacgtgt gtgtacacac cgtatacgtt cacacacatg cactatgtaa
1200
acatctgagt atgattacac atttaaatac tgcactcacc aaggttaaag tgggtaatca
1260
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1320
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1380
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1440
ttatcatttc aaaattattg tgattctcac ctccctcccc acctcagtgt tttgtctgtc
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1560
aagatttatg cccagagcct tgc
1583
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<210> 5990
<211> 260
<212> PRT
<213> Homo sapiens

<400> 5990

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Pro	Pro	Pro	Arg	Arg	Leu	Gly	Lys	Gly	Gly	Gln	Gln	Val	Ser	His	His
			20				25					30			
Pro	Pro	Ile	Ser	Cys	Phe	Tyr	Cys	Glu	Cys	Glu	Glu	Lys	Arg	Leu	Cys
		35				40					45				
Val	Asn	Thr	His	Val	Trp	Thr	Lys	Ser	Lys	Phe	Met	Gly	Met	Ser	Val
	50				55					60					
Gly	Val	Ser	Met	Ile	Gly	Glu	Gly	Val	Leu	Arg	Leu	Leu	Glu	His	Gly
65					70				75						80
Glu	Glu	Tyr	Val	Phe	Thr	Leu	Pro	Ser	Ala	Tyr	Ala	Arg	Ser	Ile	Leu
				85					90					95	
Thr	Ile	Pro	Trp	Val	Glu	Leu	Gly	Gly	Lys	Val	Ser	Ile	Asn	Cys	Ala
			100					105					110		
Lys	Thr	Gly	Tyr	Ser	Ala	Thr	Val	Ile	Phe	His	Thr	Lys	Pro	Phe	Tyr
		115					120					125			
Gly	Gly	Lys	Val	His	Arg	Val	Thr	Ala	Glu	Val	Lys	His	Asn	Pro	Thr
		130				135					140				
Asn	Thr	Ile	Val	Cys	Lys	Ala	His	Gly	Glu	Trp	Asn	Gly	Thr	Leu	Glu
145					150					155					160
Phe	Thr	Tyr	Asn	Asn	Gly	Glu	Thr	Lys	Val	Ile	Asp	Thr	Thr	Thr	Leu
			165					170					175		
Pro	Val	Tyr	Pro	Lys	Lys	Ile	Arg	Pro	Leu	Glu	Lys	Gln	Gly	Pro	Met
			180					185					190		
Glu	Ser	Arg	Asn	Leu	Trp	Arg	Glu	Val	Thr	Arg	Tyr	Leu	Arg	Leu	Gly
		195					200					205			
Asp	Ile	Asp	Ala	Ala	Thr	Glu	Gln	Lys	Arg	His	Leu	Glu	Glu	Lys	Gln
	210					215					220				
Arg	Val	Glu	Glu	Arg	Lys	Arg	Glu	Asn	Leu	Arg	Thr	Pro	Trp	Lys	Pro
225					230					235					240
Lys	Tyr	Phe	Ile	Gln	Glu	Gly	Asp	Gly	Trp	Val	Tyr	Phe	Asn	Pro	Leu
			245					250					255		
Trp	Lys	Ala	His												
			260												

<210> 5991
<211> 2440
<212> DNA
<213> Homo sapiens

<400> 5991
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gtggaaatga gcctgaagct gcagagtgtg gaatacgtgg tgttcgatga agctgaccgg
120
ctttttgaaa tgggtttcgc agagcagctg caggagatca tcgcccgcct ccccgggggc
180

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caccagacgg tgctgttctc cgccacgctg cccaaactgc tggtggaatt tgcccgggct
240
ggcctcacgg agcccgtgct catccggctt gacgtggata ccaagctcaa cgagcagctg
300
aagacctcct tcttcctcgt gcgggaggac accaaggctg ccgtgctgct ccacctgctg
360
cacaacgtgg tgcggcccca ggaccagacc gtggtgtttg tggccacgaa gcaccacgcc
420
gagtacctca ctgagctgct gacgacccag ncggtgagct gcgcccacat ctatagtgcc
480
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<211> 301
<212> PRT
<213> Homo sapiens

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Val Val Phe Asp Glu Ala Asp Arg Leu Phe Glu Met Gly Phe Ala Glu
        35   40   45
Gln Leu Gln Glu Ile Ile Ala Arg Leu Pro Gly Gly His Gln Thr Val
    50   55   60
Leu Phe Ser Ala Thr Leu Pro Lys Leu Leu Val Glu Phe Ala Arg Ala
65   70   75   80
Gly Leu Thr Glu Pro Val Leu Ile Arg Leu Asp Val Asp Thr Lys Leu
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Asn Glu Gln Leu Lys Thr Ser Phe Phe Leu Val Arg Glu Asp Thr Lys
            100   105   110
Ala Ala Val Leu Leu His Leu Leu His Asn Val Val Arg Pro Gln Asp
            115   120   125
Gln Thr Val Val Phe Val Ala Thr Lys His His Ala Glu Tyr Leu Thr
    130   135   140
Glu Leu Leu Thr Thr Gln Xaa Val Ser Cys Ala His Ile Tyr Ser Ala
145   150   155   160
Leu Asp Pro Thr Ala Arg Lys Ile Asn Leu Ala Lys Phe Thr Leu Gly
                165   170   175
Lys Cys Ser Thr Leu Ile Val Thr Asp Leu Ala Ala Arg Gly Leu Asp
            180   185   190
Ile Pro Leu Leu Asp Asn Val Ile Asn Tyr Ser Phe Pro Ala Lys Gly

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Asp Leu His Leu Phe Leu Gly Arg Ser Leu Xaa Pro Arg Pro Thr Pro
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Gln Gly Ala Leu Arg Cys Gly Arg Cys Gly Trp His Ala Gly Ser Gly
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<211> 7858
<212> DNA
<213> Homo sapiens
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            20                  25                  30
Arg Ser Ser Ser Pro Thr Ala Gly Pro Ser Thr Glu Gly Ala Glu Gly
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Pro Glu Glu Lys Lys Lys Val Lys Met Arg Arg Lys Arg Arg Leu Pro
        50                  55                  60
Asn Lys Glu Leu Ser Arg Glu Leu Ser Lys Glu Leu Asn His Glu Ile
65                  70                  75                  80
Gln Arg Thr Glu Asn Ser Leu Ala Asn Glu Asn Gln Gln Pro Ile Lys
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Ser Glu Pro Glu Ser Glu Gly Glu Glu Pro Lys Arg Pro Pro Gly Ile
            100                 105                 110
Cys Glu Arg Pro His Arg Phe Ser Lys Gly Leu Asn Gly Thr Pro Arg
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Glu Leu Arg His Gln Leu Gly Pro Ser Leu Arg Ser Pro Pro Arg Val
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Ile Ser Arg Pro Pro Pro Ser Val Ser Pro Pro Lys Cys Ile Gln Met
145                 150                 155                 160
Glu Arg His Val Ile Arg Pro Pro Ile Ser Pro Pro Pro Asp Ser
                165                 170                 175
Leu Pro Leu Asp Asp Gly Ala Ala His Val Met His Arg Glu Val Trp
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Met Ala Val Phe Ser Tyr Leu Ser His Gln Asp Leu Cys Val Cys Met
            195                 200                 205
Arg Val Cys Arg Thr Trp Asn Arg Trp Cys Cys Asp Lys Arg Leu Trp
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Thr Arg Ile Asp Leu Asn His Cys Lys Ser Ile Thr Pro Leu Met Leu
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Ser Gly Ile Ile Arg Arg Gln Pro Val Ser Leu Asp Leu Ser Trp Thr
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Asn Ile Ser Lys Lys Gln Leu Ser Trp Leu Ile Asn Arg Leu Pro Gly
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                    325                     330                     335
Trp Gly Glu Arg Ala Arg Leu Leu Asp Leu Leu Leu Pro Ser Asp Pro
                340                     345                     350
Ser Cys Ser Pro Lys Asp Ile Gly Met Ser Leu Cys Cys His Val Leu
            355                     360                     365
Ser Leu Leu Gln Ala Gln Arg Gly Ser Gly Arg Arg Gln Gly Leu Leu
        370                     375                     380
Cys Thr Arg Glu Thr Arg Ser Trp Gly Ser Ala Cys Val Ser Leu Leu
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Ser Cys
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<212> DNA
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960
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<210> 5996
<211> 140
<212> PRT
<213> Homo sapiens

<400> 5996
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Glu Arg Cys Pro Gly Ala Pro Ser Val Cys Asp Ile Gln Leu Asn Gln
            20   25   ·   30
Val Ser Pro Ala Asp Phe Thr Val Leu Ser Asp Val Leu Pro Met Phe
        35   40   45
Ser Val Asp Phe Ser Lys Gln Val Ser Ser Ser Ala Ala Cys His Ser
        50   55   60
Arg Gln Phe Val Pro Leu Ala Ser Gly Gln Ala Gln Val Val Leu Ser
65   70   75   80
Trp Trp Asp Ile Glu Met Asp Pro Glu Gly Lys Ile Lys Cys Thr Met
                85   90   95
Ala Pro Phe Trp Ala His Ser Asp Pro Glu Glu Met Gln Trp Arg Asp
            100   105   110 ·
His Trp Xaa Ala Val Cys Val Leu Pro Ala Thr Arg Gly Ala Cys Gly
            115   120   125
Ala Gly Leu Ser Ala Leu Ser Gly Ser Pro Pro Arg
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<210> 5997
<211> 1759
<212> DNA
<213> Homo sapiens

<400> 5997
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1680
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1759
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<210> 5998
<211> 72
<212> PRT
<213> Homo sapiens

<400> 5998
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Gly Ser Ala Gly Arg Trp Ala Pro Gly Trp Gly Arg Val Pro Ala Gly
            20                  25                  30
Pro Arg Cys Gly Ser Ser Cys Pro Ala Pro Arg Arg Arg Pro Ala Ala
        35                  40                  45
Pro Pro Ala Gly Arg Thr Ala Arg Cys Arg Pro Gly Ala Val Val Leu
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Cys Pro Pro Gly Leu Pro Thr Gly
65                  70
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<210> 5999
<211> 2759
<212> DNA
<213> Homo sapiens

<400> 5999
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420
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480
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720
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780
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2400
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2759

<210> 6000
<211> 757
<212> PRT
<213> Homo sapiens

<400> 6000
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            20   25   30
Gln Arg Pro Asp Gln Leu Asp Lys Val Glu Gln Tyr Arg Arg Arg Glu
        35   40   45
Ala Arg Lys Lys Ala Ser Val Glu Ala Arg Leu Lys Ala Ala Ile Gln
        50   55   60
Ser Gln Leu Asp Gly Val Arg Thr Gly Leu Ser Gln Leu His Asn Ala
65   70   75   80
Leu Asn Asp Val Lys Asp Ile Gln Gln Ser Leu Ala Asp Val Ser Lys
                85   90   95
Asp Trp Arg Gln Ser Ile Asn Thr Ile Glu Ser Leu Lys Asp Val Lys
            100   105   110
Asp Ala Val Val Gln His Ser Gln Leu Ala Ala Ala Val Glu Asn Leu
            115   120   125
Lys Asn Ile Phe Ser Val Pro Glu Ile Val Arg Glu Thr Gln Asp Leu
        130   135   140
Ile Glu Gln Gly Ala Leu Leu Gln Ala His Arg Lys Leu Met Asp Leu
145   150   155   160
Glu Cys Ser Arg Asp Gly Leu Met Tyr Glu Gln Tyr Arg Met Asp Ser
                165   170   175
Gly Asn Thr Arg Asp Met Thr Leu Ile His Gly Tyr Phe Gly Ser Thr
            180   185   190
Gln Gly Leu Ser Asp Glu Leu Ala Lys Gln Leu Trp Met Val Leu Gln
            195   200   205
Arg Ser Leu Val Thr Val Arg Arg Asp Pro Thr Leu Leu Val Ser Val
        210   215   220
Val Arg Ile Ile Glu Arg Glu Glu Lys Ile Asp Arg Arg Ile Leu Asp
225   230   235   240
Arg Lys Lys Gln Thr Gly Phe Val Pro Pro Gly Arg Pro Lys Asn Trp
                245   250   255
Lys Glu Lys Met Phe Thr Ile Leu Glu Arg Thr Val Thr Thr Arg Ile
                260   265   270
Glu Gly Thr Gln Ala Asp Thr Arg Glu Ser Asp Lys Met Trp Leu Val

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              275                   280                   285
Arg His Leu Glu Ile Ile Arg Lys Tyr Val Leu Asp Asp Leu Ile Val
    290                   295                   300
Ala Lys Asn Leu Met Val Gln Cys Phe Pro Pro His Tyr Glu Ile Phe
305                   310                   315                   320
Lys Asn Leu Leu Asn Met Tyr His Gln Ala Leu Ser Thr Arg Met Gln
                  325                   330                   335
Asp Leu Ala Ser Glu Asp Leu Glu Ala Asn Glu Ile Val Ser Leu Leu
                  340                   345                   350
Thr Trp Val Leu Asn Thr Tyr Thr Ser Thr Glu Met Met Arg Asn Val
              355                   360                   365
Glu Leu Ala Pro Glu Val Asp Val Gly Thr Leu Glu Pro Leu Leu Ser
    370                   375                   380
Pro His Val Val Ser Glu Leu Leu Asp Thr Tyr Met Ser Thr Leu Thr
385                   390                   395                   400
Ser Asn Ile Ile Ala Trp Leu Arg Lys Ala Leu Glu Thr Asp Lys Lys
                  405                   410                   415
Asp Trp Val Lys Glu Thr Glu Pro Glu Ala Asp Gln Asp Gly Tyr Tyr
              420                   425                   430
Gln Thr Thr Leu Pro Ala Ile Val Phe Gln Met Phe Glu Gln Asn Leu
          435                   440                   445
Gln Val Ala Ala Gln Ile Ser Glu Asp Leu Lys Thr Lys Val Leu Val
    450                   455                   460
Leu Cys Leu Gln Gln Met Asn Ser Phe Leu Ser Arg Tyr Lys Asp Glu
465                   470                   475                   480
Ala Gln Leu Tyr Lys Glu Glu His Leu Arg Asn Arg Gln His Pro His
              485                   490                   495
Cys Tyr Val Gln Tyr Met Ile Ala Ile Ile Asn Asn Cys Gln Thr Phe
              500                   505                   510
Lys Glu Ser Ile Val Ser Leu Lys Arg Lys Tyr Leu Lys Asn Glu Val
          515                   520                   525
Glu Glu Gly Val Ser Pro Ser Gln Pro Ser Met Asp Gly Ile Leu Asp
    530                   535                   540
Ala Ile Ala Lys Glu Gly Cys Ser Gly Leu Leu Glu Glu Val Phe Leu
545                   550                   555                   560
Asp Leu Glu Gln His Leu Asn Glu Leu Met Thr Lys Lys Trp Leu Leu
              565                   570                   575
Gly Ser Asn Ala Val Asp Ile Ile Cys Val Thr Val Glu Asp Tyr Phe
              580                   585                   590
Asn Asp Phe Ala Lys Ile Lys Lys Pro Tyr Lys Lys Arg Met Thr Ala
          595                   600                   605
Glu Ala His Arg Arg Val Val Val Glu Tyr Leu Arg Ala Val Met Gln
    610                   615                   620
Lys Arg Ile Ser Phe Arg Ser Pro Glu Glu Arg Lys Glu Gly Ala Glu
625                   630                   635                   640
Lys Met Val Arg Glu Ala Glu Gln Arg Arg Phe Leu Phe Arg Lys Leu
                  645                   650                   655
Ala Ser Gly Phe Gly Glu Asp Val Asp Gly Tyr Cys Asp Thr Ile Val
              660                   665                   670
Ala Val Ala Glu Val Ile Lys Leu Thr Asp Pro Ser Leu Leu Tyr Leu
              675                   680                   685
Glu Val Ser Thr Leu Val Ser Lys Tyr Pro Asp Ile Arg Asp Asp His
          690                   695                   700
Ile Gly Ala Leu Leu Ala Val Arg Gly Asp Ala Ser Arg Asp Met Lys
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                705                   710                   715                   720
                Gln Thr Ile Met Glu Thr Leu Glu Gln Gly Pro Ala Gln Ala Ser Pro
                                      725                   730                   735
                Ser Tyr Val Pro Leu Phe Lys Asp Ile Val Val Pro Ser Leu Asn Val
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                Ala Lys Leu Leu Lys
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                <210> 6001
                <211> 2490
                <212> DNA
                <213> Homo sapiens

                <400> 6001
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<210> 6002
<211> 263
<212> PRT
<213> Homo sapiens

<400> 6002
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Trp Leu Asp Ala Gln Ser Gly Leu Ala Ser Ala Pro Val Ser Gly Ala
      50                    55                    60
Gly Asn His Ser Tyr Cys Arg Asn Pro Asp Glu Asp Pro Ala Gly Pro
65                    70                    75                    80
Trp Cys Tyr Val Ser Gly Glu Ala Gly Val Pro Glu Lys Arg Pro Cys
               85                    90                    95
Glu Asp Leu Arg Cys Pro Glu Thr Thr Ser Gln Ala Leu Pro Ala Phe
            100                   105                   110
Thr Thr Glu Ile Gln Glu Ala Ser Glu Gly Pro Gly Ala Asp Glu Val
         115                   120                   125
Gln Val Phe Ala Pro Ala Asn Ala Leu Pro Ala Arg Ser Glu Ala Ala
      130                   135                   140
Ala Val Gln Pro Val Ile Gly Ile Ser Gln Arg Val Arg Met Asn Ser
145                   150                   155                   160
Lys Glu Lys Lys Asp Leu Gly Thr Leu Gly Tyr Val Leu Gly Ile Thr
            165                   170                   175
Met Met Val Ile Ile Ile Ala Ile Gly Ala Gly Ile Ile Leu Gly Tyr
            180                   185                   190
Ser Tyr Lys Arg Gly Lys Asp Leu Lys Glu Gln His Asp Gln Lys Val
         195                   200                   205
Cys Glu Arg Glu Met Gln Arg Ile Thr Leu Pro Leu Ser Ala Phe Thr
      210                   215                   220
Asn Pro Thr Cys Glu Ile Val Asp Glu Lys Thr Val Val Val His Thr
225                   230                   235                   240
Ser Gln Thr Pro Val Asp Pro Gln Glu Gly Thr Thr Pro Leu Met Gly
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<211> 3107
<212> DNA
<213> Homo sapiens

<400> 6003
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480
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720
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780
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840
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900
ccttggcact gagatggaga cggcagtgcc ttttcaccct ctccgtgagg ccttgtgctg
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1020
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1140
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1200
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1260
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1320
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1380
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1440
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1620
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1680
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1740
cctgagggag ggactgagac cacctcaatg ctgncagttc ctggggtcac gcagagtcca
1800
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1860
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1920
cctgcagagg ccccagcccc cttgtcctct gcattccagc cacctgccct gggcccagct
1980
ccaaaggaag ggggcccaag ctctctgaat aaaaggtgca catgaggacc aaggaggcct
2040
gacactggga ggggacagct ccacctcctc tccccggaca ccccaaaagg cggagacgtt
2100

```
cacaagctgt cctgtcggcg gctgctgttt gtggaggagt aaagcatcct agcgagactg
2160
caggctcggt gtacatctga tttactgaat tttaaagtct gggatgttag tggggaagag
2220
gcgaggtgag cattgcgtga cgccgaggac taggcggggc ggggactgca cctggctagg
2280
cacccccacc ctgggcaact tgcccacgga ccccagggca gtgagtagtg acaggaggta
2340
gcccggggtg agacctctca cagcaagaag atggtgtggt tgctggggcc tccctggaga
2400
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2460
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2520
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2580
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2640
atcctggcca ccatcagcgt ccaggtgccc ctactcgccc ttcctcttct tcagaagcct
2700
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2760
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2820
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2880
acggacccac acgacgcccg gctctgggcg gggatggggc cggggctgct gcggggtccc
2940
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3000
acctcctgtc actactcagt gccgtggggt ccgtgggcaa gttgcccagg gtgggggtgc
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3107
```

<210> 6004
<211> 140
<212> PRT
<213> Homo sapiens

<400> 6004

```
Met Val Thr Thr Pro Ser Trp Trp Ala Val Trp Pro Trp Val Ser Gly
 1               5                   10                  15
Gly Ala Thr Gly Cys Thr Glu Leu Gly Ser Trp Glu Thr Val Pro Arg
             20                  25                  30
Pro Ala Val Pro Lys Val Ala Pro Gly Thr Met Pro Thr Arg Pro Glu
         35                  40                  45
Gly Gly Thr Glu Thr Thr Ser Met Leu Xaa Val Pro Gly Val Thr Gln
     50                  55                  60
Ser Pro Arg Gly Glu Arg Gly Ser Gly Pro His Ala Val Gln Gly Val
65                  70                  75                  80
Ala Leu Pro Xaa Arg Gly Ser Pro Arg Gly Pro Gly Pro Arg Ala Pro
                 85                  90                  95
Gly Arg Gly Arg Asp Cys Gly Gly Asn Gly Pro Ala Glu Ala Pro Ala
```

```
            100                   105                   110
Pro Leu Ser Ser Ala Phe Gln Pro Pro Ala Leu Gly Pro Ala Pro Lys
        115                   120                   125
Glu Gly Gly Pro Ser Ser Leu Asn Lys Arg Cys Thr
     130                   135                   140
```

<210> 6005
<211> 1735
<212> DNA
<213> Homo sapiens

<400> 6005
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gagcttggat tgcccggtgc cccaggaatc gatggagaga agggccccaa aggacagaaa
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ggagacccag gagagcctgg gccagcagga ctcaaagggg aagcaggcga gatgggcttg
120
tccggcctcc cgggcgctga cggcctcaag ggggagaagg gggagtcggc atctcagcct
180
acaggagagc ctggctcagc tcatagtgag ccagggcccc ctggcccccc tggcccccca
240
ggcccgatgg gcctccaggg aatccagggt cccaagggct tggatggagc aaagggagag
300
aagggtgcgt cgggtgagag aggctccagc ggcctgcctg ggccagttgg cccaccgggc
360
cttattgggc tgccaggaac caaaggagag aagggcagac ccggggagcc aggactagat
420
ggtttccctg accccgagg agagaaaggt gatcggagcg agcgtggaga gaagggagaa
480
cgaggggtcc ccggccggaa aggagtgaag ggccagaagg gcgagccggg accaccaggc
540
ctggaccagc cgtgtcccgt gggccccgac gggctgcctg tgcctggctg ctggcataag
600
tgacccacag gcccagctca cacctgtaca gatccgtgtg gacattttta attttgtaa
660
aaacaaaaca gtaatatatt gatctttttt catggaatgc gctacctgtg gccttttaac
720
attcaagagt atgcccaccc agccccaaag ccaccggcat gtgaagctgc cggaaagtgg
780
acaggccaga ccagggagat gtgtacctga ggggcaccct tgggcctggg ctttcccagg
840
aaggagatga aggtagaagc acctggctcg ggcaaggcta gaaagatgct acgttgggcc
900
ttcagtcacc tgatcagcag agagactctc agctgtggta ctgccctgta agaacctgcc
960
cccgcaaaac tctggagtcc ctgggacaca ccctatccaa gaagacccag gggtggaaca
1020
gcggctgctg ttgctcctgg cctcatcagc ctccaaactc aaccacaacc agctgcctct
1080
gcagttggac aagacttggc ccccggacaa gactcgccca gcacttgcgg ctgggcccgg
1140
ggagcagtga gtggaaatcc cccacgaggg tctagctcta ccacattcag gaggcctcag
1200
gaggccagcc tgccatgaga gcacatgtcc tctggccagg agtagtggct gagctctgtg
1260
```

```
atcgctgtga tgtggaccca gctccaggga gcagagtgtc ggggatggag gggcccagcc
1320
tggactgact gctacttcct gtctctgttt ccattatcac ccagagaggg acaagatagg
1380
acatggcctg gaccagggag gcaggcctcc cactcagagt ctgggtctca ctggccccaa
1440
gtctcccacc cagaactctg gccaaaaatg gctctctagg tgggctgtgc aggcaaagca
1500
aagctcaggg ctggttccca gctggcctga gcaggggggcc tgccaccaga cccacccacg
1560
ctctgacgag aggcttttcc acctccagca agtgttccca gcaaccagct ccatcctggc
1620
tgcttgcctt ccatttccgt gtagatggag atcactgtgt gtaataaacc acaagtgcgt
1680
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaag
1735


<210> 6006
<211> 200
<212> PRT
<213> Homo sapiens


<400> 6006
Glu Leu Gly Leu Pro Gly Ala Pro Gly Ile Asp Gly Glu Lys Gly Pro
 1               5                   10                  15
Lys Gly Gln Lys Gly Asp Pro Gly Glu Pro Gly Pro Ala Gly Leu Lys
                20                  25                  30
Gly Glu Ala Gly Glu Met Gly Leu Ser Gly Leu Pro Gly Ala Asp Gly
        35                  40                  45
Leu Lys Gly Glu Lys Gly Glu Ser Ala Ser Gln Pro Thr Gly Glu Pro
    50                  55                  60
Gly Ser Ala His Ser Glu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
65                  70                  75                  80
Gly Pro Met Gly Leu Gln Gly Ile Gln Gly Pro Lys Gly Leu Asp Gly
                85                  90                  95
Ala Lys Gly Glu Lys Gly Ala Ser Gly Glu Arg Gly Ser Ser Gly Leu
                100                 105                 110
Pro Gly Pro Val Gly Pro Pro Gly Leu Ile Gly Leu Pro Gly Thr Lys
        115                 120                 125
Gly Glu Lys Gly Arg Pro Gly Glu Pro Gly Leu Asp Gly Phe Pro Gly
    130                 135                 140
Pro Arg Gly Glu Lys Gly Asp Arg Ser Glu Arg Gly Glu Lys Gly Glu
145                 150                 155                 160
Arg Gly Val Pro Gly Arg Lys Gly Val Lys Gly Gln Lys Gly Glu Pro
                165                 170                 175
Gly Pro Pro Gly Leu Asp Gln Pro Cys Pro Val Gly Pro Asp Gly Leu
                180                 185                 190
Pro Val Pro Gly Cys Trp His Lys
        195                 200


<210> 6007
<211> 693
<212> DNA
<213> Homo sapiens
```

<400> 6007
cagcccctta agccatctcc ctccagtgac aacctctatt cagccttcac cagtgatggt
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gccatttcag taccaagcct ttctgctcca ggtcaaggga agatggtgaa aaaagtctgt
120
ccttgcaacc agctctgtag aaccagcagc acaaacactg ttggggcaac agtgaacagc
180
caagccgccc aagctcagcc tcctgccatg acgtccagca ggaagggcac attcacagat
240
gacttgcaca agttggtaga caattgggcc cgagatgcca tgaatctctc aggcaggaga
300
ggaagcaaag ggacatgaa ttatgagggc cctggaatgg caaggaagtt ctctgcacct
360
gggcaactgt gcatctccat gacctcgaac ctgggtggct ctgcccccat ctctgcagca
420
tcagctacct ctctaggtca cttcaccaag tctatgtgcc ccccacagca gtatggcttt
480
ccagctaccc catttggcgc tcaatggagt gggacgggtg cccagcacc acagccactt
540
ggccagttcc aacctgtggg aactgcctcc ttgcagaatt tcaacatcag caatttgcag
600
aaatccatca gcaacccccc aggctccaac ctgcggacca cttagaccta gagacattaa
660
ctgaatagat ctgggggcag gagatggaat gct
693

<210> 6008
<211> 214
<212> PRT
<213> Homo sapiens

<400> 6008
Gln Pro Leu Lys Pro Ser Pro Ser Ser Asp Asn Leu Tyr Ser Ala Phe
1   5   10   15
Thr Ser Asp Gly Ala Ile Ser Val Pro Ser Leu Ser Ala Pro Gly Gln
            20   25   30
Gly Lys Met Val Lys Lys Val Cys Pro Cys Asn Gln Leu Cys Arg Thr
        35   40   45
Ser Ser Thr Asn Thr Val Gly Ala Thr Val Asn Ser Gln Ala Ala Gln
    50   55   60
Ala Gln Pro Pro Ala Met Thr Ser Ser Arg Lys Gly Thr Phe Thr Asp
65   70   75   80
Asp Leu His Lys Leu Val Asp Asn Trp Ala Arg Asp Ala Met Asn Leu
                85   90   95
Ser Gly Arg Arg Gly Ser Lys Gly His Met Asn Tyr Glu Gly Pro Gly
            100   105   110
Met Ala Arg Lys Phe Ser Ala Pro Gly Gln Leu Cys Ile Ser Met Thr
        115   120   125
Ser Asn Leu Gly Gly Ser Ala Pro Ile Ser Ala Ala Ser Ala Thr Ser
    130   135   140
Leu Gly His Phe Thr Lys Ser Met Cys Pro Pro Gln Gln Tyr Gly Phe
145   150   155   160
Pro Ala Thr Pro Phe Gly Ala Gln Trp Ser Gly Thr Gly Gly Pro Ala

```
              165                170                175
Pro Gln Pro Leu Gly Gln Phe Gln Pro Val Gly Thr Ala Ser Leu Gln
              180                185                190
Asn Phe Asn Ile Ser Asn Leu Gln Lys Ser Ile Ser Asn Pro Pro Gly
          195                200                205
Ser Asn Leu Arg Thr Thr
    210
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```
<210> 6009
<211> 1570
<212> DNA
<213> Homo sapiens
```

```
<400> 6009
nnctgcacca tggcggcccg gcttgtcagc cgatgcgggg ctgtgcgtgc agctccccac
60
agcggcccgc tggctgtcct ggcgcaggtg gtccggcgct caacagacac cgtgtatgac
120
gtggtggtgt cgggtggagg cctggtgggc gctgccatgg cctgtgcctt gggatatgat
180
attcactttc atgacaagaa aatcctgttg ctcgaagcag gtccaaagaa agtactggag
240
aaattgtcag aaacttacag caacagggtc agctccattt cccctggctc tgcaacgctt
300
ctcagtagtt ttggtgcctg ggaccatatc tgcaacatga gatacagagc ctttcggcga
360
atgcaggtgt gggacgcctg ctcagaggcc ctgataatgt ttgataagga taatttagat
420
gacatgggct atatcgtgga gaatgatgtc atcatgcatg ctctcactaa gcagttggag
480
gctgtgtctg accgagtgac ggttctctac aggagcaaag ccattcgcta tacctggcct
540
tgtccatttc ctatggccga ctccagccct tgggttcata ttaccctagg tgatggcagc
600
accttccaga ccaaattgtt gataggtgca gatggtcaca actccggagt acggcaggct
660
gttggaatcc agaatgtgag ctggaactat gaccagtctg ctgttgtggc tactctgcat
720
ttatcagagg ccacagaaaa caacgtagcc tggcagagat ttcttccctc tgggcctatt
780
gctctgctcc cgctctcaga caccttgagt tccttggttt ggtccacgtc ccatgaacat
840
gcagcagagc tagttagcat ggatgaggaa aaatttgtgg atgccgttaa ctctgccttt
900
tggagtgatg ctgaccacac ggacttcatc gacacagctg tgccatgct gcagtatcct
960
gtcagccttc tgaagcccac taaggtctcg gctcgccagc tgcccccaag cgtaccatgg
1020
gtggatgcca aaagccgagt tctgtttcct cttgggttgg acatgctgc tgagtacgtc
1080
aggcctcggg tggcgctcat tggggatgca gcccacagag tccatccgct tgcaggacag
1140
ggtgtcaaca tgggctttgg ggatatctcc agcttggccc atcacctcag tacggcagcc
1200
```

```
ttcaatggga aggacttagg ttccgtgagc cacctcacag gttatgaaac agaaagacag
1260
cgtcacaaca ctgctcttct ggctgctaca gacttactaa aaaggctcta ttctaccagt
1320
gcctccccgc ttgtgttgct caggacgtgg ggcttgcagg ccacaaatgc agtgtctcca
1380
ctcaaagaac agattatggc ctttgcaagc aaatgagtac tcctctccta aagaaagatt
1440
acgttgatga aaagaacat cctgcccagg acccatcata catattttca agatcttatt
1500
taatttaata aacttacttt acattaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa
1560
aaaaaaaaa
1570
```

<210> 6010
<211> 468
<212> PRT
<213> Homo sapiens

<400> 6010

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Met Ala Ala Arg Leu Val Ser Arg Cys Gly Ala Val Arg Ala Ala Pro
1               5                   10                  15
His Ser Gly Pro Leu Ala Val Leu Ala Gln Val Val Arg Arg Ser Thr
            20                  25                  30
Asp Thr Val Tyr Asp Val Val Val Ser Gly Gly Gly Leu Val Gly Ala
        35                  40                  45
Ala Met Ala Cys Ala Leu Gly Tyr Asp Ile His Phe His Asp Lys Lys
    50                  55                  60
Ile Leu Leu Leu Glu Ala Gly Pro Lys Lys Val Leu Glu Lys Leu Ser
65                  70                  75                  80
Glu Thr Tyr Ser Asn Arg Val Ser Ser Ile Ser Pro Gly Ser Ala Thr
                85                  90                  95
Leu Leu Ser Ser Phe Gly Ala Trp Asp His Ile Cys Asn Met Arg Tyr
            100                 105                 110
Arg Ala Phe Arg Arg Met Gln Val Trp Asp Ala Cys Ser Glu Ala Leu
        115                 120                 125
Ile Met Phe Asp Lys Asp Asn Leu Asp Asp Met Gly Tyr Ile Val Glu
    130                 135                 140
Asn Asp Val Ile Met His Ala Leu Thr Lys Gln Leu Glu Ala Val Ser
145                 150                 155                 160
Asp Arg Val Thr Val Leu Tyr Arg Ser Lys Ala Ile Arg Tyr Thr Trp
                165                 170                 175
Pro Cys Pro Phe Pro Met Ala Asp Ser Ser Pro Trp Val His Ile Thr
            180                 185                 190
Leu Gly Asp Gly Ser Thr Phe Gln Thr Lys Leu Leu Ile Gly Ala Asp
            195                 200                 205
Gly His Asn Ser Gly Val Arg Gln Ala Val Gly Ile Gln Asn Val Ser
        210                 215                 220
Trp Asn Tyr Asp Gln Ser Ala Val Val Ala Thr Leu His Leu Ser Glu
225                 230                 235                 240
Ala Thr Glu Asn Asn Val Ala Trp Gln Arg Phe Leu Pro Ser Gly Pro
                245                 250                 255
Ile Ala Leu Leu Pro Leu Ser Asp Thr Leu Ser Ser Leu Val Trp Ser
```

5187

```
                  260                    265                    270
Thr Ser His Glu His Ala Ala Glu Leu Val Ser Met Asp Glu Glu Lys
          275                    280                    285
Phe Val Asp Ala Val Asn Ser Ala Phe Trp Ser Asp Ala Asp His Thr
      290                    295                    300
Asp Phe Ile Asp Thr Ala Gly Ala Met Leu Gln Tyr Pro Val Ser Leu
305                    310                    315                    320
Leu Lys Pro Thr Lys Val Ser Ala Arg Gln Leu Pro Pro Ser Val Pro
              325                    330                    335
Trp Val Asp Ala Lys Ser Arg Val Leu Phe Pro Leu Gly Leu Gly His
              340                    345                    350
Ala Ala Glu Tyr Val Arg Pro Arg Val Ala Leu Ile Gly Asp Ala Ala
          355                    360                    365
His Arg Val His Pro Leu Ala Gly Gln Gly Val Asn Met Gly Phe Gly
      370                    375                    380
Asp Ile Ser Ser Leu Ala His His Leu Ser Thr Ala Ala Phe Asn Gly
385                    390                    395                    400
Lys Asp Leu Gly Ser Val Ser His Leu Thr Gly Tyr Glu Thr Glu Arg
              405                    410                    415
Gln Arg His Asn Thr Ala Leu Leu Ala Ala Thr Asp Leu Leu Lys Arg
              420                    425                    430
Leu Tyr Ser Thr Ser Ala Ser Pro Leu Val Leu Leu Arg Thr Trp Gly
          435                    440                    445
Leu Gln Ala Thr Asn Ala Val Ser Pro Leu Lys Glu Gln Ile Met Ala
      450                    455                    460
Phe Ala Ser Lys
465


<210> 6011
<211> 1331
<212> DNA
<213> Homo sapiens

<400> 6011
ngcaggcccg cctaagccaa gggcaaccta ggcatgcagc ttggttttgc tgacttcatg
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ggtgtgttca gcaaaggggt tcgggaagtg gagcgggttc tacagctgcc caaggaaccg
120
ggtgattctg cacagttcac caaagccatt gccatcatct tccccttttct gtatctgctg
180
gagaaggtgg agtgcacccc cagccaggag cacctgaagc accagaccgt ctaccgcctg
240
ctcaagtgcg cgcccagggg caagaacggc ttcacccctc tgcacatggc tgtggacaag
300
gacaccacaa acgtgggccg ctatcccgtg ggcagattcc cctccctgca cgtggtcaaa
360
gtgctgctcg actgcggggc cgacccggac agcagggatt ttgacaacaa caccccgcta
420
cacatagcag cccagaacaa ctgcccggcc atcatgaatg ccctgatcga agcaggggcc
480
cacatggacg ccaccaatgc cttcaagaag acggcctacg agctgctgga cgagaagctg
540
ctggccaggg gtaccatgca gcccttcaac tacgtgaccc tgcagtgcct tgcggcccgg
600
```

```
gccctggata agaacaagat cccttacaag ggcttcatcc cggaagatct agaggcattc
660
atcgaactgc actgacctgc ccagaacatc tgcaccctca cctctcccct ctcctgctga
720
gatgggggaa atccggctgg ggtatagcag atgctcgttc ttgcctcctt caggcaccaa
780
tcaggagaag ggttctgcct cccatcccct ctacctgcag acagggtcgg aggtgttagc
840
gagcctttgg tgctagaagc ctgcggggtc atgtgctaag aggacagtct ttctccggga
900
gcccgctcac tcattctgag ttaggaaaag acacaagacc ttccccacat cctgtctgcc
960
tgggttaggg aggcctttgc cttgttacct agaggcggag ggactgaagc cattgcgttc
1020
cttccctgct agaaacacag gaagaagttg aggacggtct gccttccctc gtccctttac
1080
ctggccagat aactccagcc gctgaataca gtgttaggac tgggggctcc tgagatgaga
1140
gtttgagatt cagggaatga gaccacctct catttcttcc agcatgatcg cgcctgttcc
1200
cgtgccaccg tagtccctgg caggcaggca gggctctgcc cagggcagcc tgccacttgc
1260
atagctttcg gttggtttgg tgttctgttt atttaataag tgggcaggtt gcaagcgttg
1320
cacagaaatt t
1331
```

<210> 6012
<211> 219
<212> PRT
<213> Homo sapiens

<400> 6012

```
Ala Lys Gly Asn Leu Gly Met Gln Leu Gly Phe Ala Asp Phe Met Gly
1               5                   10                  15
Val Phe Ser Lys Gly Val Arg Glu Val Glu Arg Val Leu Gln Leu Pro
            20                  25                  30
Lys Glu Pro Gly Asp Ser Ala Gln Phe Thr Lys Ala Ile Ala Ile Ile
        35                  40                  45
Phe Pro Phe Leu Tyr Leu Leu Glu Lys Val Glu Cys Thr Pro Ser Gln
    50                  55                  60
Glu His Leu Lys His Gln Thr Val Tyr Arg Leu Leu Lys Cys Ala Pro
65                  70                  75                  80
Arg Gly Lys Asn Gly Phe Thr Pro Leu His Met Ala Val Asp Lys Asp
                85                  90                  95
Thr Thr Asn Val Gly Arg Tyr Pro Val Gly Arg Phe Pro Ser Leu His
            100                 105                 110
Val Val Lys Val Leu Leu Asp Cys Gly Ala Asp Pro Asp Ser Arg Asp
        115                 120                 125
Phe Asp Asn Asn Thr Pro Leu His Ile Ala Ala Gln Asn Asn Cys Pro
    130                 135                 140
Ala Ile Met Asn Ala Leu Ile Glu Ala Gly Ala His Met Asp Ala Thr
145                 150                 155                 160
Asn Ala Phe Lys Lys Thr Ala Tyr Glu Leu Leu Asp Glu Lys Leu Leu
```

```
                     165                   170                   175
Ala Arg Gly Thr Met Gln Pro Phe Asn Tyr Val Thr Leu Gln Cys Leu
                 180                   185                   190
Ala Ala Arg Ala Leu Asp Lys Asn Lys Ile Pro Tyr Lys Gly Phe Ile
             195                   200                   205
Pro Glu Asp Leu Glu Ala Phe Ile Glu Leu His
         210                   215
```

<210> 6013
<211> 2204
<212> DNA
<213> Homo sapiens

<400> 6013

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acgcgtgaag ggggcggagg tggtggtgga ggtggcagtg tggctcctaa gccaccacgg
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ggccggaaga agaagcggat gctggaatca gggctgcccg agatgaatga cccttatgtc
120
ctctcccctg aggatgatga tgaccatcag aaagacggcg agacctacag gtgccggatg
180
tgctcactga cattctactc caagtcggag atgcagatcc actccaagat gcacacggag
240
accatcaagc cccacaagtg cccacactgc tccaagacct cgccaacag ctcctacctg
300
gcccagcaca tccgtatcca ctcaggggcc aagccctaca actgtaactt ttgtgagaaa
360
tccttccgtc agctctcaca cctccagcag cacacgaa tccacactgg tgatagacca
420
tacaaatgtg cacacccagg ctgtgagaaa gccttcacac aactctccaa tctgcagtcc
480
cacagacggc aacacaacaa agataaaccc ttcaagtgcc acaactgtca tcgggcgtac
540
acggatgcag cctcactaga ggtgcacctg tctacgcaca cagtgaagca tgccaaggtg
600
tacacctgca ctatctgcag tcgggcatac acatcagaaa cataccttat gaaacatatg
660
cgcaaacaca acccgcctga tcttcagcaa caggtgcagg cagcagcagc agcggcagca
720
gtggcccagg cccaggctca agctcaagcc caggctcagg ctcaggctca agcccaggcc
780
caggcccagg cctcccaggc atcacagcag cagcagcagc agcagcagca gcagcagcag
840
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900
ggggacagca atcccaaccc tccaccccag tgttcctttg acctgacccc gtataagacg
960
gcggagcatc ataaggacat ctgcctcact gtcaccacca gcaccatcca ggtggagcac
1020
ctggccagct cttagagatc cgtgctgcca cccactggga agaggaagaa gtagtcctgg
1080
tgtcttcttt ctccaactct tggtgggaaa agtccttttc ttccttgaca ggccttggct
1140
ccatctcctt gggcctctgt cacggctttc cttcacagga taccatcctt tttctgaact
1200
```

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cttcttcaaa aggaacatca gccctcctga ttgcaaagga atactgagct gatggtgtca
1260
tccagcagcc tcccctccca agcaaagctt ctaaaactgg gggtcggtgc tcaagggaag
1320
gatttgctat gacctcatag aaccttgtcc agtgtggcca cttaccctat ccttaccctc
1380
cttatcctca aagtttgggc tgatgtaaga ctagaggctg gccctcccag ataacagaga
1440
aaagggagcc ccaaatgcaa ccagcctctt gttctattct tgcctgcaaa agaacagagg
1500
tttctcaaat gcctcagtcc ctgagagcca tttcttcccc tacatcgtct cactttgctt
1560
cctattgact gctggtagaa ggagatttgg ggtaggggct agacctcctt ttatttgaag
1620
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1680
gcttagaagt gtgtgttatg gtttttacgga tttccttgaa gcctctctcc ttctctgcct
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1860
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1920
aaatatatat atataaatat attataccca ctcatcacgg ccatctttgt tgtaaccatt
1980
tctgtgttta taaatgcatt atctctgaga attttcatat ttgatgtttt gtttattttt
2040
gtcctttttt tccctctctc cacccctgtc ctctagccac agcattttc ttttgtctt
2100
ttttttttt ttttaaatca tggcagattt cagaggaaag gaaattaaaa aaaaaatcag
2160
gaaaccagtt gttataaagt aatttaaaaa tgaagaaaaa aaaa
2204
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```
<210> 6014
<211> 182
<212> PRT
<213> Homo sapiens

<400> 6014
Arg Gln His Asn Lys Asp Lys Pro Phe Lys Cys His Asn Cys His Arg
1               5                   10                  15
Ala Tyr Thr Asp Ala Ala Ser Leu Glu Val His Leu Ser Thr His Thr
            20                  25                  30
Val Lys His Ala Lys Val Tyr Thr Cys Thr Ile Cys Ser Arg Ala Tyr
        35                  40                  45
Thr Ser Glu Thr Tyr Leu Met Lys His Met Arg Lys His Asn Pro Pro
    50                  55                  60
Asp Leu Gln Gln Gln Val Gln Ala Ala Ala Ala Ala Ala Val Ala
65                  70                  75                  80
Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala
                85                  90                  95
Gln Ala Gln Ala Gln Ala Ser Gln Ala Ser Gln Gln Gln Gln Gln Gln
```

```
                100                105                110
Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro His Phe Gln Ser
        115                120                125
Pro Gly Ala Ala Pro Gln Gly Gly Gly Gly Gly Asp Ser Asn Pro Asn
    130                135                140
Pro Pro Pro Gln Cys Ser Phe Asp Leu Thr Pro Tyr Lys Thr Ala Glu
145                150                155                160
His His Lys Asp Ile Cys Leu Thr Val Thr Thr Ser Thr Ile Gln Val
                165                170                175
Glu His Leu Ala Ser Ser
            180
```

<210> 6015
<211> 612
<212> DNA
<213> Homo sapiens

<400> 6015
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120
tgagaatcct gattgaatgg aagtgaagag ccatgagaag ctcgcccagg agagtctaat
180
ttattctgat tacagctcat ggagagtgta gggcatgtga ggccactcca gctattgtta
240
ttcaacttgc atctgcccct gctgatcccc tgagaggctg gcagcctctc agggctcctt
300
gggcggtgag ccctcctccg cagcctgcaa gcctttttac ctctttccat cacctgagcc
360
tgaaagtgtg cctgcccgac cttgctcctg gccttatttc tcttcctatc ttatctccat
420
tccgcaggtg cctcagccat tgcctaccct tttgcacaaa attaaaaaga aaagaaaaaa
480
gccagtgaga gaacagtcac acgataaagg cacagcacag cagttggttg tctcttttta
540
aacaggaagt agcagtcatt ctatatggat gttcagctag acccacgggg ctttaacctt
600
acctggcatg gc
612
```

<210> 6016
<211> 99
<212> PRT
<213> Homo sapiens

<400> 6016
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Met Glu Arg Gly Lys Lys Ala Cys Arg Leu Arg Arg Arg Ala His Arg
1                5                10                15
Pro Arg Ser Pro Glu Arg Leu Pro Ala Ser Gln Gly Ile Ser Arg Gly
        20                25                30
Arg Cys Lys Leu Asn Asn Asn Ser Trp Ser Gly Leu Thr Cys Pro Thr
        35                40                45
Leu Ser Met Ser Cys Asn Gln Asn Lys Leu Asp Ser Pro Gly Arg Ala
```

```
      50                      55                      60
Ser His Gly Ser Ser Leu Pro Phe Asn Gln Asp Ser Gln Lys Pro Ala
65                      70                      75                      80
Phe Tyr Asn Ile Phe Leu Lys Lys Ser His Ser Phe Gln Ser Leu Leu
                85                      90                      95
Gln Tyr Ile
```

```
<210> 6017
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6017
ccggccaagt ttaactttgc tagtgatgtg ttggatcact gggctgacat ggagaaggct
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ggcaagcgac tcccaagccc agccctgtgg tgggtgaatg ggaaggggaa ggaattaatg
120
tggaatttca gagaactgag tgaaaacagc cagcaggcag ccaacgtcct ctcgggagcc
180
tgtggcctgc agcgtgggga tcgtgtggca gtgatgctgc cccgagtgcc tgagtggtgg
240
ctggtgatcc tgggctgcat tcgagcaggt ctcatcttta tgcctggaac catccagatg
300
aaatccactg acatactgta taggttgcag atgtctaagg ccaaggctat tgttgctggg
360
gatgaagtca tccaagaagt ggacacagtg gcatctgaat gtccttctct gagaattaag
420
ctactggtgt ctgagaaaag ctgcgatggg tggctgaact tcaagaaact actaaatgag
480
gcatccacca ctcatcactg tgtggagact ggaagccagg aagcatctgc catctacttc
540
actagtggga ccagtggtct tcccaagatg gcagaacatt cctactcgag cctgggcctc
600
aaggccaaga tggatgctgg ttggacaggc ctgcaagcct ctgatataat gtggaccata
660
tcagacacag gttggatact gaacatcttg ggctcacttt tggaatcttg gacattagga
720
gcatgcacat ttgttcatct cttgccaaag tttgacccac tggttattct aaagacactc
780
tccagttatc aatcaagag tatgatgggt gcccctattg tttaccggat gttgctacag
840
caggatcttt ccagttacaa gttcccccat ctacagaact gcctcgctgg aggggagtcc
900
cttcttccag aaactctgga gaactggagg gcccagacag gactggacat ccgagaattc
960
tatggccaga cagaaacggg attaacttgc atggtttcca agacaatgaa aatcaaacca
1020
ggatacatgg gaacggctgc ttcctgttat gatgtacagg ttatagatga taagggcaac
1080
gtcctgcccc ccggcacaga aggagacatt ggcatcaggg tcaaacccat caggcctata
1140
ggcatcttct ctggctatgt ggaaaatccc gacaagacag cagccaacat tcgaggagac
1200
```

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ttttggctcc ttggagaccg gggaatcaaa gatgaagatg ggtatttcca gtttatggga
1260
cgggcagatg atatcattaa ctccagcggg taccggattg gaccctcgga ggtagagaat
1320
gcactgatga agcaccctgc tgtggttgag acggctgtga tcagcagccc agacccgtc
1380
cgaggagagg tggtgaaggc atttgtggtc ctggcctcgc agttcctgtc ccatgaccca
1440
gaacagctca ccaaggagct gcagcagcat gtgaagtcag tgacagcccc atacaagtac
1500
ccaagaaaga tagagtttgt cttgaacctg cccaagactg tcacagggaa aattcaacga
1560
gccaagcttc gagacaagga gtggaagatg tccggaaaag cccgtgcgca gtgagacatc
1620
taagagacat tcatttggat tcccctcttc tttctctttc ttttcccttt gggcccttgg
1680
ccttactatg atgatatgag attctttatg aaagaacatg aatgtaagtt ttgtcttgcc
1740
ctggttatta gccttggtta ttagcacaaa actttaccat gttagatgtt gaaagaagaa
1800
agggaaggaa tgagagagag tgaaaaggag agggtaacag aaaaaaagga aagaaaagta
1860
agtcagggaa atattaaaac tgcaagggaa agcaattgaa aaagaaataa agtagggaaa
1920
gaaggagaga ggaagcaagg gaaggaggaa gaaaggaaag aggagatgaa aggggggagaa
1980
aagatagaag aaaaataatt gaagggagaa tcagaaaaat aaagagaaga aaggaaagaa
2040
ataaagagag aaagagaaag aagaaagagc aaaagaacac aagaaagaaa g
2091
```

```
<210> 6018
<211> 537
<212> PRT
<213> Homo sapiens

<400> 6018
Pro Ala Lys Phe Asn Phe Ala Ser Asp Val Leu Asp His Trp Ala Asp
1               5                   10                  15
Met Glu Lys Ala Gly Lys Arg Leu Pro Ser Pro Ala Leu Trp Trp Val
                20                  25                  30
Asn Gly Lys Gly Lys Glu Leu Met Trp Asn Phe Arg Glu Leu Ser Glu
            35                  40                  45
Asn Ser Gln Gln Ala Ala Asn Val Leu Ser Gly Ala Cys Gly Leu Gln
        50                  55                  60
Arg Gly Asp Arg Val Ala Val Met Leu Pro Arg Val Pro Glu Trp Trp
65                  70                  75                  80
Leu Val Ile Leu Gly Cys Ile Arg Ala Gly Leu Ile Phe Met Pro Gly
                85                  90                  95
Thr Ile Gln Met Lys Ser Thr Asp Ile Leu Tyr Arg Leu Gln Met Ser
                100                 105                 110
Lys Ala Lys Ala Ile Val Ala Gly Asp Glu Val Ile Gln Glu Val Asp
            115                 120                 125
Thr Val Ala Ser Glu Cys Pro Ser Leu Arg Ile Lys Leu Leu Val Ser
```

```
         130                      135                      140
Glu Lys Ser Cys Asp Gly Trp Leu Asn Phe Lys Lys Leu Leu Asn Glu
145                 150                      155                 160
Ala Ser Thr Thr His His Cys Val Glu Thr Gly Ser Gln Glu Ala Ser
                165                      170                      175
Ala Ile Tyr Phe Thr Ser Gly Thr Ser Gly Leu Pro Lys Met Ala Glu
                180                      185                      190
His Ser Tyr Ser Ser Leu Gly Leu Lys Ala Lys Met Asp Ala Gly Trp
            195                      200                      205
Thr Gly Leu Gln Ala Ser Asp Ile Met Trp Thr Ile Ser Asp Thr Gly
            210                      215                      220
Trp Ile Leu Asn Ile Leu Gly Ser Leu Leu Glu Ser Trp Thr Leu Gly
225                      230                      235                 240
Ala Cys Thr Phe Val His Leu Leu Pro Lys Phe Asp Pro Leu Val Ile
                245                      250                      255
Leu Lys Thr Leu Ser Ser Tyr Pro Ile Lys Ser Met Met Gly Ala Pro
                260                      265                      270
Ile Val Tyr Arg Met Leu Leu Gln Gln Asp Leu Ser Ser Tyr Lys Phe
            275                      280                      285
Pro His Leu Gln Asn Cys Leu Ala Gly Gly Glu Ser Leu Leu Pro Glu
            290                      295                      300
Thr Leu Glu Asn Trp Arg Ala Gln Thr Gly Leu Asp Ile Arg Glu Phe
305                      310                      315                 320
Tyr Gly Gln Thr Glu Thr Gly Leu Thr Cys Met Val Ser Lys Thr Met
                325                      330                      335
Lys Ile Lys Pro Gly Tyr Met Gly Thr Ala Ala Ser Cys Tyr Asp Val
                340                      345                      350
Gln Val Ile Asp Asp Lys Gly Asn Val Leu Pro Pro Gly Thr Glu Gly
            355                      360                      365
Asp Ile Gly Ile Arg Val Lys Pro Ile Arg Pro Ile Gly Ile Phe Ser
            370                      375                      380
Gly Tyr Val Glu Asn Pro Asp Lys Thr Ala Ala Asn Ile Arg Gly Asp
385                      390                      395                 400
Phe Trp Leu Leu Gly Asp Arg Gly Ile Lys Asp Glu Asp Gly Tyr Phe
                405                      410                      415
Gln Phe Met Gly Arg Ala Asp Asp Ile Ile Asn Ser Ser Gly Tyr Arg
                420                      425                      430
Ile Gly Pro Ser Glu Val Glu Asn Ala Leu Met Lys His Pro Ala Val
            435                      440                      445
Val Glu Thr Ala Val Ile Ser Ser Pro Asp Pro Val Arg Gly Glu Val
            450                      455                      460
Val Lys Ala Phe Val Val Leu Ala Ser Gln Phe Leu Ser His Asp Pro
465                 470                      475                 480
Glu Gln Leu Thr Lys Glu Leu Gln Gln His Val Lys Ser Val Thr Ala
                485                      490                      495
Pro Tyr Lys Tyr Pro Arg Lys Ile Glu Phe Val Leu Asn Leu Pro Lys
                500                      505                      510
Thr Val Thr Gly Lys Ile Gln Arg Ala Lys Leu Arg Asp Lys Glu Trp
            515                      520                      525
Lys Met Ser Gly Lys Ala Arg Ala Gln
            530                      535
```

```
<210> 6019
<211> 3002
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<212> DNA
<213> Homo sapiens

<400> 6019
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taagaacttg gccacgttcg catcggtctc tcccatctgg acaagaggca ccacacgtct
120
ctcggcccgg cggcacacgg cccggcagaa atgcagcgcc gagctgatct tgcctcccga
180
cgggcacgct gctccagagt gggcagggct gggagggacc ggtgaggacc tggagggact
240
tggggaactg gaggacagcg tctgtcaagg caggatgaag gccgtgagtg gtgggagctg
300
gctggtgtac ttgtcgatcc actgctccag ctccaggatg ggccccgcct tgaacgtggt
360
atactttaag tgagcctccc gggccgagga gcatggtgtc gccagggccg agccgacgtc
420
ctgcaatgtg cactggattt tctgaagctc ttcggcaaat gtatggccct tttctgtgac
480
taattccaga gcaaacccaa tagctgaact taattcatct gtagttccca cagccttcct
540
cgaagacacc caggatcccc aagatttaca ccaaaacggg agacaaaggg ttttctagta
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ccttcacagg agaaaggaga cccaaagatg accaagtgtt tgaagccgtg ggaactacag
660
atgaattaag ttcagctatt gggtttgctc tggaattagt cacagaaaag ggccatacat
720
ttgccgaaga gcttcagaaa atccagtgca cattgcagga cgtcggctcg ccctggcga
780
caccatgctc ctcggcccgg gaggctcact taaagtatac cacgttcaag gcggggccca
840
tcctggagct ggagcagtgg atcgacaagt acaccagcca gctcccacca ctcacggcct
900
tcatcctgcc ttcgggaggc aagatcagct cggcgctgca tttctgccgg gccgtgtgcc
960
gccgggccga gagacgtgtg gtgcctcttg tccagatggg agagaccgat gcgaacgtgg
1020
ccaagttctt aaacagactc agtgactatc tcttcacgct agccagatat gcagccatga
1080
aggagggaa tcaagagaaa atatacaaga aaaatgaccc atcggccgag tctgagggac
1140
tctgaaatca cagaaagtgg gagcttggag gatccctcca tggcgatggc cgtggagaga
1200
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1380
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1440
ctgtgcggaa aaggaataaa agttggaagc cccggaccac tggaaccttg aacccaccag
1500

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ctggctgtac ccggagccgt ggcagcagcc ctcatcccca tggcggccat cccagccctg
1560
gacccagagg ccgagcccag catggacgtg attttggtgg gatccagtga gctctcaagc
1620
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1680
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1740
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2220
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2400
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2520
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2580
gcccagaaca agcagagctc gaagctcgcg gccaagtggc ccaccaagct ggtgaagaac
2640
tgctttctcc ccctaagaga atatttcaag tattttttcaa cagaactcac ttcctctttа
2700
taaatgagtc actatactgt gaagaaaaag acttttccta gaacaaaggc aactttcctc
2760
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2820
cacgttccgt tgggttctgg agactcaggg tctctccccc atcacgctgg ctcatgggac
2880
ggggcgaggc ccacgccgct gcacacagga ccacacgtgg tggtgcgcga tgtacttcct
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gaaagcattt ctgtgttcta gttgagaagt tcgagtatat ttattataag atagttattg
3000
gt
3002
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<210> 6020

<211> 387
<212> PRT
<213> Homo sapiens

<400> 6020
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Met Ala Ala Ile Pro Ala Leu Asp Pro Glu Ala Glu Pro Ser Met Asp
1               5                   10                  15
Val Ile Leu Val Gly Ser Ser Glu Leu Ser Ser Ser Val Ser Pro Gly
            20                  25                  30
Thr Gly Arg Asp Leu Ile Ala Tyr Glu Val Lys Ala Asn Gln Arg Asn
        35                  40                  45
Ile Glu Asp Ile Cys Ile Cys Cys Gly Ser Leu Gln Val His Thr Gln
    50                  55                  60
His Pro Leu Phe Glu Gly Gly Ile Cys Ala Pro Cys Lys Asp Lys Phe
65                  70                  75                  80
Leu Asp Ala Leu Phe Leu Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys
                85                  90                  95
Ser Ile Cys Cys Ser Gly Glu Thr Leu Leu Ile Cys Gly Asn Pro Asp
            100                 105                 110
Cys Thr Arg Cys Tyr Cys Phe Glu Cys Val Asp Ser Leu Val Gly Pro
    115                 120                 125
Gly Thr Ser Gly Lys Val His Ala Met Ser Asn Trp Val Cys Tyr Leu
    130                 135                 140
Cys Leu Pro Ser Ser Arg Ser Gly Leu Leu Gln Arg Arg Arg Lys Trp
145                 150                 155                 160
Arg Ser Gln Leu Lys Ala Phe Tyr Asp Arg Glu Ser Glu Asn Pro Leu
                165                 170                 175
Glu Met Phe Glu Thr Val Pro Val Trp Arg Arg Gln Pro Val Arg Val
            180                 185                 190
Leu Ser Leu Phe Glu Asp Ile Lys Lys Glu Leu Thr Ser Leu Gly Phe
            195                 200                 205
Leu Glu Ser Gly Ser Asp Pro Gly Gln Leu Lys His Val Val Asp Val
    210                 215                 220
Thr Asp Thr Val Arg Lys Asp Val Glu Glu Trp Gly Pro Phe Asp Leu
225                 230                 235                 240
Val Tyr Gly Ala Thr Ala Pro Leu Gly His Thr Cys Asp Arg Pro Pro
                245                 250                 255
Ser Trp Tyr Leu Phe Gln Phe His Arg Phe Leu Gln Tyr Ala Arg Pro
            260                 265                 270
Lys Pro Gly Ser Pro Arg Pro Phe Phe Trp Met Phe Val Asp Asn Leu
            275                 280                 285
Val Leu Asn Lys Glu Asp Leu Asp Val Ala Ser Arg Phe Leu Glu Met
    290                 295                 300
Glu Pro Val Thr Ile Pro Asp Val His Gly Gly Ser Leu Gln Asn Ala
305                 310                 315                 320
Val Arg Val Trp Ser Asn Ile Pro Ala Ile Arg Ser Ser Arg His Trp
            325                 330                 335
Ala Leu Val Ser Glu Glu Glu Leu Ser Leu Leu Ala Gln Asn Lys Gln
            340                 345                 350
Ser Ser Lys Leu Ala Ala Lys Trp Pro Thr Lys Leu Val Lys Asn Cys
    355                 360                 365
Phe Leu Pro Leu Arg Glu Tyr Phe Lys Tyr Phe Ser Thr Glu Leu Thr
    370                 375                 380
Ser Ser Leu
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5198

385

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<210> 6021
<211> 3145
<212> DNA
<213> Homo sapiens

<400> 6021
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120
aaggggggaag gagattttct gctgcatgtg gctttaacca agagagcaga tccagctgag
180
cttagaacaa tatttttgaa gtatgcaagc attgagaaaa acggtgaatt tttcatgtcc
240
cccaatgact ttgtcactcg atacttgaac attttttggag aaagccagcc taatccaaag
300
actgtggaac ttttaagtgg agtggtggat cagaccaaag atggattaat atcttttcaa
360
gaatttgttg cctttgaatc tgtcctgtgt gcccctgatg ctttgtttat ggtagccttt
420
cagctgtttg acaaagctgg caaaggagaa gtaacttttg aggatgttaa gcaagttttt
480
ggacagacca caattcatca acatattcca tttaactggg attcagaatt tgtgcaacta
540
cattttggaa aagaaagaaa aagacacctg acatatgcgg aatttactca gtttttattg
600
gaaatacaac tggagcacgc aaagcaagcc tttgtgcaac gggacaatgc taggactggg
660
agagtcacag ccatcgactt ccgagacatc atggtcacca tccgccccca tgtcttgact
720
cctttttgtag aagaatgtct agtagctgct gctggaggta ccacatccca tcaagttagt
780
ttctcctatt ttaatggatt taattcgctc cttaacaaca tggaactcat tagaaagatc
840
tatagcactc tggctggcac caggaaagat gttgaagtga ctaaggagga gtttgttctg
900
gcagctcaga aatttggtca ggttacaccc atggaagttg acatcttgtt tcagttagca
960
gatttatatg agccaagggg acgtatgacc ttagcagaca ttgaacggat tgctcctctg
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1140
tctgttgctg gagctgttgg agccactgct gtgtatccta tcgatcttgt aaaaactcga
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atgcagaacc aacgatcaac tggctctttt gtgggagaac tcatgtataa aaacagcttt
1260
gactgtttta agaaagtgct acgctatgaa ggcttctttg gactgtatag aggtctgttg
1320
ccacagttat tgggagttgc cccagagaag gccataaaac ttacagtgaa cgattttgtg
1380
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agggataaat ttatgcacaa agatggttcg gtcccacttg cagcagaaat tcttgctgga
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<211> 708
<212> PRT
<213> Homo sapiens

<400> 6022

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Tyr Ile Asp Phe Gly Gly Val Lys Pro Met Gly Ser Glu Pro Val Pro
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Lys Ser Arg Ile Asn Leu Pro Ala Pro Asn Pro Asp His Val Gly Gly
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Tyr Lys Leu Ala Val Ala Thr Phe Ala Gly Ile Glu Asn Lys Phe Gly
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<211> 1014
<212> DNA
<213> Homo sapiens

<400> 6023

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<210> 6024
<211> 100
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<400> 6024
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        35   40   45
Pro Ile Lys Ile Ser Ser Thr Pro Pro Ser Gly Ser Arg Leu Asp Pro
    50   55   60
Gln Ile Ala Ser Ser Ala Phe Pro Gly Leu Gly Ser Leu Gly Gly Gln
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<211> 496
<212> PRT
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Ile Pro Ser Arg Ala Gly Ala Asn Trp Ser Val Asn Phe His Arg Ile
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Asn Glu Asn Glu Lys Ser Pro Ser Gln Asn Arg Lys Ala Lys Asp Ala
65              70              75              80
Thr Ser Asp Asn Gly Lys Asp Gly Leu Ala Tyr Ser Ala Leu Leu Lys
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Asn Glu Leu Leu Gly Ala Gly Ile Glu Lys Val Gln Asp Pro Gln Thr
            100             105             110
Glu Asp Arg Arg Leu Gln Pro Ser Thr Pro Glu Lys Lys Gly Leu Phe
        115             120             125
Thr Tyr Ser Leu Ser Thr Lys Arg Ser Ser Pro Asp Asp Gly Asn Asp
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Val Ser Pro Tyr Ser Leu Ser Pro Val Ser Asn Lys Ser Gln Lys Leu
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Leu Arg Ser Pro Arg Lys Pro Thr Arg Lys Ile Ser Lys Ile Pro Phe
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Lys Val Leu Asp Ala Pro Glu Leu Gln Asp Asp Phe Tyr Leu Asn Leu
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Arg Asp Arg Met Ile Leu Gln Arg Asp Ile Arg Thr Pro Pro Leu Gln
        290             295             300
Ser Glu Arg Arg Leu Gln Gly His Arg Gln Glu Val Cys Gly Leu Lys
305             310             315             320
Trp Ser Thr Asp His Gln Leu Leu Ala Ser Gly Gly Asn Asp Asn Lys
            325             330             335
Leu Leu Val Trp Asn His Ser Ser Leu Ser Pro Val Gln Gln Tyr Thr
            340             345             350
Glu His Leu Ala Ala Val Lys Ala Ile Ala Trp Ser Pro His Gln His
        355             360             365
Gly Leu Leu Ala Ser Gly Gly Gly Thr Ala Asp Arg Cys Ile Arg Phe
    370             375             380
Trp Asn Thr Leu Thr Gly Gln Pro Leu Gln Cys Ile Asp Thr Gly Ser
385             390             395             400
Gln Val Cys Asn Leu Ala Trp Ser Lys His Ala Asn Glu Leu Val Ser
            405             410             415
Thr His Gly Tyr Ser Gln Asn Gln Ile Leu Val Trp Lys Tyr Pro Ser
            420             425             430
Leu Thr Gln Val Ala Lys Leu Thr Gly His Ser Tyr Arg Val Leu Tyr
```

```
          435                    440                    445
Leu Ala Met Ser Pro Asp Gly Glu Ala Ile Val Thr Gly Ala Gly Asp
      450                    455                    460
Glu Thr Leu Arg Phe Trp Asn Val Phe Ser Lys Thr Arg Ser Thr Lys
465                    470                    475                    480
Val Lys Trp Glu Ser Val Ser Val Leu Asn Leu Phe Thr Arg Ile Arg
                  485                    490                    495
```

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<210> 6027
<211> 305
<212> DNA
<213> Homo sapiens
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<400> 6027
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gtggtggaga tgaatgccag tgacgaccgt agcccggagg tcttccgcac acgcatcgag
120
gcggccaccc aaatggagtc ggggcttggg gctgccggga agcccaactg cctggtcatc
180
gatgagatcg acggggcccc cgtggtgggc tccttgatgc ctgggtaggt gggtgggcgg
240
gcaggcaggc gggcagcagg gcctggactc accgtgtcct ctgacctccc ccaaggccgc
300
catca
305
```

```
<210> 6028
<211> 75
<212> PRT
<213> Homo sapiens
```

```
<400> 6028
Xaa Pro Gly Leu Gly Lys Thr Thr Leu Ala His Val Ile Ala Arg His
1                   5                   10                    15
Ala Gly Tyr Ser Val Val Glu Met Asn Ala Ser Asp Asp Arg Ser Pro
              20                    25                    30
Glu Val Phe Arg Thr Arg Ile Glu Ala Ala Thr Gln Met Glu Ser Gly
          35                    40                    45
Leu Gly Ala Ala Gly Lys Pro Asn Cys Leu Val Ile Asp Glu Ile Asp
      50                    55                    60
Gly Ala Pro Val Val Gly Ser Leu Met Pro Gly
65                    70                    75
```

```
<210> 6029
<211> 1350
<212> DNA
<213> Homo sapiens
```

```
<400> 6029
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60
agaagcaggg gtgcccaggc tgtcacagcc ttgcagtgca tggtgggttc cgtggccaac
120
```

ttgccagggg acaggcctgt tgctggcact cccccacaa ttacagggtg ggagtgaagg
180
acctcgcggc tgcggacagg tccttgttag taaggaggag gctctgcagt cccggtgggg
240
tcatcttgcc tctccggact gctccctctg actggtgaag ccacactctg tgaagctgtc
300
tgacagaagg ggacacgcct ttgctgccca ggatggacct gggccaccca ggatgccgct
360
ggcctcagcc agggcacgtg tgcccagcgc tggctcctgc tgacccctgg actggctccc
420
atctcgggaa tgacgcctgc cgtgggaatc gtggagaggg ggtttaattt aacttggaag
480
gagcacagaa aggaaagtgt ggagtgcgga gcgaggcctc tggtttggcc ggctccggtt
540
gctggggatg gccacaccct ggcagcaggc ggccagagac caggaaggcc tacccagcac
600
ctgtccagaa aagattggtg tgggttgacc tggcctatgc ggggcagctc agtttgaagc
660
aggaacttcc ccaaacgtgc ccaggctcca agacagcagc attcactttg caccgtgctg
720
agcagagcgg ggcctcgcca ggtggaaagc cctaggaagg ctgcgtgctc tgcaaaccca
780
ggggtgctgt ggccgtacag caggggcgtc cgtgtccagg cagctttgtc atgtcttcca
840
aaggtcagga aggcgccacc gccctgcccc acgacagctg cgtctgcaag cgccagctct
900
gagcactgtt ctccgccgac atgaggacac catccaagaa ttcctcctgg agacctcct
960
gaggagacgc gaagaccatc gatgctttgg aagaatgaaa agaagtttct gctaagccaa
1020
acctaggtgg atgggaagtg cctgtgtgga tgtgaagcca ccttgggtgg gcggctcgga
1080
gctcctctgc ccacatcgcc tcactgggac tcgccatcca gtctgacgtc tttgatgtcc
1140
ccataaatct gctggctttc aggagaacac gtcttgaagc acagctgaac ttgaatcttt
1200
tctgggtcct cctgctgggc cgtggtgggg agccgctccc gttgcctcaa ggcctccaag
1260
cctgccaggt caggctgatg gcagtggctg cgcatgacca tgatgcggtg gcccctggtt
1320
atgcgcggct tcggcagccc agccgagcct
1350

<210> 6030
<211> 99
<212> PRT
<213> Homo sapiens

<400> 6030
Met Gly Thr Ser Lys Thr Ser Asp Trp Met Ala Ser Pro Ser Glu Ala
1   5   10   15
Met Trp Ala Glu Glu Leu Arg Ala Ala His Pro Arg Trp Leu His Ile
            20   25   30
His Thr Gly Thr Ser His Pro Pro Arg Phe Gly Leu Ala Glu Thr Ser

```
                35                    40                    45
Phe His Ser Ser Lys Ala Ser Met Val Phe Ala Ser Pro Gln Glu Val
        50                    55                    60
Ser Gln Glu Glu Phe Leu Asp Gly Val Leu Met Ser Ala Glu Asn Ser
65                    70                    75                    80
Ala Gln Ser Trp Arg Leu Gln Thr Gln Leu Ser Trp Gly Arg Ala Val
                85                    90                    95
Ala Pro Ser
```

```
<210> 6031
<211> 1316
<212> DNA
<213> Homo sapiens

<400> 6031
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120
gttgccaagt ctacctgtgc catcaacaac accctcattg ctttcttcat tttgactacg
180
ataaaaggca gtgctttcct cagtgctatt tttcttgcct tagcgacata ccagtctctg
240
tacccactca ccttgtttgt cccaggactc ctctatctcc tccagcggca gtacatacct
300
gtgaaaatga gagcaaagc cttctggatc ttttcttggg agtatgccat gatgtatgtg
360
ggaagcctag tggtaatcat ttgcctctcc ttcttccttc tcagctcttg ggatttcatc
420
cccgcagtct atggctttat actttctgtt ccagatctca ctccaaacat tggtcttttc
480
tggtacttct ttgcagagat gtttgagcac ttcagcctct tctttgtatg tgtgtttcag
540
atcaacgtct tcttctacac catcccctta gccataaagc taaaggagca ccccatcttc
600
ttcatgttta tccagatcgc tgtcatcgcc atctttaagt cctacccgac agtgggggac
660
gtggcgctct acatggcctt cttccccgtg tggaaccatc tctacagatt cctgagaaac
720
atctttgtcc tcacctgcat catcatcgtc tgttccctgc tcttccctgt cctgtggcac
780
ctctggattt atgcaggaag tgccaactct aatttctttt atgccatcac actgaccttc
840
aacgttgggc agatcctgct catctctgat tacttctatg ccttcctgcg gcgggagtac
900
tacctcacac atggcctcta cttgaccgcc aaggatggca cagaggccat gctcgtgctc
960
aagtaggcct ggctggcaca gggctgcatg gacctcaggg ggctgtgggg ccagaagctg
1020
ggccaagccc tccagccaga gttgccagca ggcgagtgct tgggcagaag aggttcgagt
1080
ccagggtcac aagtctctgg taccaaaagg gacccatggc tgactgacag caaggcctat
1140
```

ggggaagaac tgggagctcc ccaacttgga ccccaccctt gtggctctgc acaccaagga
1200

gcccctccc agacaggaag gagaagaggc aggtgagcag ggcttgttag attgtggcta
1260

cttaataaat gttttttgtt atgaagtcta aaaaaaaaaa aaaaaaaaaa aaaaaa
1316

<210> 6032
<211> 321
<212> PRT
<213> Homo sapiens

<400> 6032
Xaa Leu Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro
1   5   10   15
Met Glu Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu
            20   25   30
Asn Pro Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile
            35   40   45
Asn Asn Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser
        50   55   60
Ala Phe Leu Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu
65   70   75   80
Tyr Pro Leu Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg
            85   90   95
Gln Tyr Ile Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser
            100   105   110
Trp Glu Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys
        115   120   125
Leu Ser Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr
        130   135   140
Gly Phe Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe
145   150   155   160
Trp Tyr Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val
            165   170   175
Cys Val Phe Gln Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile
            180   185   190
Lys Leu Lys Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val
            195   200   205
Ile Ala Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr
        210   215   220
Met Ala Phe Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn
225   230   235   240
Ile Phe Val Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe Pro
            245   250   255
Val Leu Trp His Leu Trp Ile Tyr Ala Gly Ser Ala Asn Ser Asn Phe
            260   265   270
Phe Tyr Ala Ile Thr Leu Thr Phe Asn Val Gly Gln Ile Leu Leu Ile
        275   280   285
Ser Asp Tyr Phe Tyr Ala Phe Leu Arg Arg Glu Tyr Tyr Leu Thr His
    290   295   300
Gly Leu Tyr Leu Thr Ala Lys Asp Gly Thr Glu Ala Met Leu Val Leu
305   310   315   320
Lys

<210> 6033
<211> 5157
<212> DNA
<213> Homo sapiens

<400> 6033
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120
caggagcatg acttaaagtt aaacttgaag tttgaaatcg aggttctctg caagaacctt
180
gcattagaca tcaatgagct aaaacctgga aacctcctaa aggataaaga tcgcctgaag
240
aatttagatg agcaactctc tgctccaagg aaagatgtca agcagccaga agaactccct
300
cccatcacaa ccacaacaac ttctactaca ccagctacca acaccacttg tacagccacg
360
gttccaccac agccacagta cagctaccac gacatcaatg tctattccct tgcgggcttg
420
gcaccacaca ttactctaaa tccaacaatt cccttgtttc aggcccatcc acagttgaag
480
cagtgtgtgc gtcaggcaat tgaacgggct gtccaggagc tggtccatcc tgtggtggat
540
cgatcaatta agattgccat gactacttgt gagcaaatag tcaggaagga ttttgccctg
600
gattcggagg aatctcgaat gcgaatagca gctcatcaca tgatgcgtaa cttgacagct
660
ggaatggcta tgattacatg cagggaacct ttgctcatga gcatatctac caacttaaaa
720
aacagttttg cctcagccct tcgtactgct tccccacaac aaagagaaat gatggatcag
780
gcagctgctc aattagctca ggacaattgt gagttggctt gctgttttat tcagaagact
840
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900
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960
gaacggatgc cagagcaaat caggctgaaa gttggtggtg tggacccaaa gcagttggct
1020
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1080
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1140
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1200
gccatgaacc ctcaagctca ggctcttcga agtctcttgg aggttgtagt tttatctcga
1260
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1380

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1920
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1980
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2220
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2340
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2400
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2460
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2580
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3000
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catgggaac caacaactaa cttcttgctg aatgattgat ttgattgatt gattgatagg
4620
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4920
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5040
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5157


<210> 6034
<211> 1096
<212> PRT
<213> Homo sapiens


<400> 6034
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 1               5                  10                  15
Lys Asp Lys Asp Arg Leu Lys Asn Leu Asp Glu Gln Leu Ser Ala Pro
                20                  25                  30
Arg Lys Asp Val Lys Gln Pro Glu Glu Leu Pro Pro Ile Thr Thr Thr
            35                  40                  45
Thr Thr Ser Thr Thr Pro Ala Thr Asn Thr Thr Cys Thr Ala Thr Val
        50                  55                  60
Pro Pro Gln Pro Gln Tyr Ser Tyr His Asp Ile Asn Val Tyr Ser Leu
65                  70                  75                  80
Ala Gly Leu Ala Pro His Ile Thr Leu Asn Pro Thr Ile Pro Leu Phe
                85                  90                  95
Gln Ala His Pro Gln Leu Lys Gln Cys Val Arg Gln Ala Ile Glu Arg
                100                 105                 110
Ala Val Gln Glu Leu Val His Pro Val Val Asp Arg Ser Ile Lys Ile
            115                 120                 125
Ala Met Thr Thr Cys Glu Gln Ile Val Arg Lys Asp Phe Ala Leu Asp
        130                 135                 140
Ser Glu Glu Ser Arg Met Arg Ile Ala Ala His His Met Met Arg Asn
145                 150                 155                 160
Leu Thr Ala Gly Met Ala Met Ile Thr Cys Arg Glu Pro Leu Leu Met
                165                 170                 175
Ser Ile Ser Thr Asn Leu Lys Asn Ser Phe Ala Ser Ala Leu Arg Thr
                180                 185                 190
Ala Ser Pro Gln Gln Arg Glu Met Met Asp Gln Ala Ala Ala Gln Leu
            195                 200                 205
Ala Gln Asp Asn Cys Glu Leu Ala Cys Cys Phe Ile Gln Lys Thr Ala
        210                 215                 220
Val Glu Lys Ala Gly Pro Glu Met Asp Lys Arg Leu Ala Thr Glu Phe
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225                   230                   235                   240
Glu Leu Arg Lys His Ala Arg Gln Glu Gly Arg Arg Tyr Cys Asp Pro
                245                   250                   255
Val Val Leu Thr Tyr Gln Ala Glu Arg Met Pro Glu Gln Ile Arg Leu
                260                   265                   270
Lys Val Gly Gly Val Asp Pro Lys Gln Leu Ala Val Tyr Glu Glu Phe
                275                   280                   285
Ala Arg Asn Val Pro Gly Phe Leu Pro Thr Asn Asp Leu Ser Gln Pro
        290                   295                   300
Thr Gly Phe Leu Ala Gln Pro Met Lys Gln Ala Trp Ala Thr Asp Asp
305                   310                   315                   320
Val Ala Gln Ile Tyr Asp Lys Cys Ile Thr Glu Leu Glu Gln His Leu
                325                   330                   335
His Ala Ile Pro Pro Thr Leu Ala Met Asn Pro Gln Ala Gln Ala Leu
                340                   345                   350
Arg Ser Leu Leu Glu Val Val Val Leu Ser Arg Asn Ser Arg Asp Ala
        355                   360                   365
Ile Ala Ala Leu Gly Leu Leu Gln Lys Ala Val Glu Gly Leu Leu Asp
        370                   375                   .380
Ala Thr Ser Gly Ala Asp Ala Asp Leu Leu Leu Arg Tyr Arg Glu Cys
385                   390                   395                   400
His Leu Leu Val Leu Lys Ala Leu Gln Asp Gly Arg Ala Tyr Gly Ser
                405                   410                   415
Pro Trp Cys Asn Lys Gln Ile Thr Arg Cys Leu Ile Glu Cys Arg Asp
                420                   425                   430
Glu Tyr Lys Tyr Asn Val Glu Ala Val Glu Leu Leu Ile Arg Asn His
        435                   440                   445
Leu Val Asn Met Gln Gln Tyr Asp Leu His Leu Ala Gln Ser Met Glu
        450                   455                   460
Asn Gly Leu Asn Tyr Met Ala Val Ala Phe Ala Met Gln Leu Val Lys
465                   470                   475                   480
Ile Leu Leu Val Asp Glu Arg Ser Val Ala His Val Thr Glu Ala Asp
                485                   490                   495
Leu Phe His Thr Ile Glu Thr Leu Met Arg Ile Asn Ala His Ser Arg
                500                   505                   510
Gly Asn Ala Pro Glu Gly Leu Pro Gln Leu Met Glu Val Val Arg Ser
        515                   520                   525
Asn Tyr Glu Ala Met Ile Asp Arg Ala His Gly Gly Pro Asn Phe Met
        530                   535                   540
Met His Ser Gly Ile Ser Gln Ala Ser Glu Tyr Asp Asp Pro Pro Gly
545                   550                   555                   560
Leu Arg Glu Lys Ala Glu Tyr Leu Leu Arg Glu Trp Val Asn Leu Tyr
                565                   570                   575
His Ser Ala Ala Ala Gly Arg Asp Ser Thr Lys Ala Phe Ser Ala Phe
                580                   585                   590
Val Gly Gln Val Glu Leu Leu Glu Arg Lys Met His Gln Gln Gly Ile
        595                   600                   605
Leu Lys Thr Asp Asp Leu Ile Thr Arg Phe Phe Arg Leu Cys Thr Glu
        610                   615                   620
Met Cys Val Glu Ile Ser Tyr Arg Ala Gln Ala Glu Gln Gln His Asn
625                   630                   635                   640
Pro Ala Ala Asn Pro Thr Met Ile Arg Ala Lys Cys Tyr His Asn Leu
                645                   650                   655
Asp Ala Phe Val Arg Leu Ile Ala Leu Leu Val Lys His Ser Gly Glu
```

```
                  660                 665                 670
Ala Thr Asn Thr Val Thr Lys Ile Asn Leu Leu Asn Lys Val Leu Gly
        675                 680                 685
Ile Val Val Gly Val Leu Leu Gln Asp His Asp Val Arg Gln Ser Glu
        690                 695                 700
Phe Gln Gln Leu Pro Tyr His Arg Ile Phe Ile Met Leu Leu Leu Glu
705                 710                 715                 720
Leu Asn Ala Pro Glu His Val Leu Glu Thr Ile Asn Phe Gln Thr Leu
                725                 730                 735
Thr Ala Phe Cys Asn Thr Phe His Ile Leu Arg Pro Thr Lys Ala Pro
                740                 745                 750
Gly Phe Val Tyr Ala Trp Leu Glu Leu Ile Ser His Arg Ile Phe Ile
                755                 760                 765
Ala Arg Met Leu Ala His Thr Pro Gln Gln Lys Gly Trp Pro Met Tyr
        770                 775                 780
Ala Gln Leu Leu Ile Asp Leu Phe Lys Tyr Leu Ala Pro Phe Leu Arg
785                 790                 795                 800
Asn Val Glu Leu Thr Lys Pro Met Gln Ile Leu Tyr Lys Gly Thr Leu
                805                 810                 815
Arg Val Leu Leu Val Leu Leu His Asp Phe Pro Glu Phe Leu Cys Asp
                820                 825                 830
Tyr His Tyr Gly Phe Cys Asp Val Ile Pro Pro Asn Cys Ile Gln Leu
        835                 840                 845
Arg Asn Leu Ile Leu Ser Ala Phe Pro Arg Asn Met Arg Leu Pro Asp
850                 855                 860
Pro Phe Thr Pro Asn Leu Lys Val Asp Met Leu Ser Glu Ile Asn Ile
865                 870                 875                 880
Ala Pro Arg Ile Leu Thr Asn Phe Thr Gly Val Met Pro Pro Gln Phe
                885                 890                 895
Lys Lys Asp Leu Asp Ser Tyr Leu Lys Thr Arg Ser Pro Val Thr Phe
                900                 905                 910
Leu Ser Asp Leu Arg Ser Asn Leu Gln Val Ser Asn Glu Pro Gly Asn
        915                 920                 925
Arg Tyr Asn Leu Gln Leu Ile Asn Ala Leu Val Leu Tyr Val Gly Thr
        930                 935                 940
Gln Ala Ile Ala His Ile His Asn Lys Gly Ser Thr Pro Ser Met Ser
945                 950                 955                 960
Thr Ile Thr His Ser Ala His Met Asp Ile Phe Gln Asn Leu Ala Val
                965                 970                 975
Asp Leu Asp Thr Glu Gly Arg Tyr Leu Phe Leu Asn Ala Ile Ala Asn
                980                 985                 990
Gln Leu Arg Tyr Pro Asn Ser His Thr His Tyr Phe Ser Cys Thr Met
        995                 1000                1005
Leu Tyr Leu Phe Ala Glu Ala Asn Thr Glu Ala Ile Gln Glu Gln Ile
        1010                1015                1020
Thr Arg Val Leu Leu Glu Arg Leu Ile Val Asn Arg Pro His Pro Trp
1025                1030                1035                1040
Gly Leu Leu Ile Thr Phe Ile Glu Leu Ile Lys Asn Pro Ala Phe Lys
                1045                1050                1055
Phe Trp Asn His Glu Phe Val His Cys Ala Pro Glu Ile Glu Lys Leu
                1060                1065                1070
Phe Gln Ser Val Ala Gln Cys Cys Met Gly Gln Lys Gln Ala Gln Gln
        1075                1080                1085
Val Met Glu Gly Thr Gly Ala Ser
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            1090   1095

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<210> 6035
<211> 320
<212> DNA
<213> Homo sapiens

<400> 6035
tgatcacaaa gtccctgctg agtctggggg ataggaaggg tctcaatcat ggtccatggg
60
taatctcttt gcccatgtga atgtgcccaa tgtatcaaag gctccattct aaatggcatg
120
gtggggcagt ggtgggcatt gtggctctgt gatctgggcc aggctcccag ccaccctggg
180
ggttccctgc tgggctcctg gaggacctgc ctcaacccctt ggatatgggg ttccacctga
240
cagcaggaaa agagatttga ggcctggagt ccaggcagga cagatggtag aaaccaatgg
300
agatgcatgg ccctggcgcc
320


<210> 6036
<211> 102
<212> PRT
<213> Homo sapiens

<400> 6036
Met His Leu His Trp Phe Leu Pro Ser Val Leu Pro Gly Leu Gln Ala
1               5                   10                  15
Ser Asn Leu Phe Ser Cys Cys Gln Val Glu Pro His Ile Gln Gly Leu
            20                  25                  30
Arg Gln Val Leu Gln Glu Pro Ser Arg Glu Pro Pro Gly Trp Leu Gly
        35                  40                  45
Ala Trp Pro Arg Ser Gln Ser His Asn Ala His His Cys Pro Thr Met
    50                  55                  60
Pro Phe Arg Met Glu Pro Leu Ile His Trp Ala His Ser His Gly Gln
65                  70                  75                  80
Arg Asp Tyr Pro Trp Thr Met Ile Glu Thr Leu Pro Ile Pro Gln Thr
                85                  90                  95
Gln Gln Gly Leu Cys Asp
                100


<210> 6037
<211> 3910
<212> DNA
<213> Homo sapiens

<400> 6037
aagcagccgn agcgtagctt ggctccggcc ctgcctggcg ccctgtctat cacggcgctg
60
tgcactgccc tcgccgagcc cgcctggttg cacatccacg gaggcacctg ttcgcgccag
120
gagctggggg tctccgacgt gttgggctat gtgcacccgg acctgctgaa agatttctgc
180
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atgaatcccc agacagtgct gctcctgcgg gtcatcgccg ccttctgttt cctgggcatc
240
ctgtgtagtc tctccgcttt ccttctggat gtctttgggc cgaagcatcc tgctctgaag
300
atcactcgtc gctatgcctt cgcccatatc ctaacggttc tgcagtgtgc caccgtcatt
360
ggcttttctt attgggcttc tgaactcatc ttggcccagc agcagcagca taagaagtac
420
catggatccc aggtctatgt caccttcgcc gttagcttct acctggtggc aggagctggt
480
ggagcctcaa tcctggccac ggcagccaac ctcctgcgcc actaccccac agaggaagag
540
gagcaggcgc tggagctgct ctcagagatg gaagagaacg agccctaccc ggcggaatat
600
gaggtcatca accagttcca gccacctcct gcttacacac cctaatgcca gccctgggct
660
ctcttcctcg gcagcccctc cctcaactct gcagctcctc tcgcacccag aggagctcct
720
ttccccagca ggcctcactg gtaggatcct gaccatcttc tccaaacctt ccccaggaga
780
gactctgcct ttagggtcat ccaagtatcc ctgctctcag aaccggaggt ccactggttt
840
tctataatgt actctttccc tcctgccaca tcctgccccc ttcacattca cgagtcatta
900
ccagccaggg aaggtcatcc aagtttcctc cagcatgggc gatatctttg ggaccgagac
960
tttccttgga gagctgctga gagcggacag tcccaaaaac aagtgtcaaa gggcccaagg
1020
gaaagggac tgtgccctgg aggctcactt cacagggatc agtgtttgct ccacagctgt
1080
agctctgggc tgacgccccc cagacccctt ccttctcgga gtgacccgcc cccaggccac
1140
ctgctccggg gagttctgtg cactttactc tttggacttc tcctcacgtg tgccctggtt
1200
ttatggggag agggaatcgc tgttgggaag gcagagcagt tgcaaccctc tctgcccttg
1260
cttcatgtgg ctggagccca ggcaaggaga gcaggagcca gcgtgagact gaggcccct
1320
ggtgcctatc aaggaccaga gtgaagggga ctacatctcc cagcccttca ccttttaaat
1380
atgagtggtt ttaaaaggaa aaaaatgaaa ccaggcaaca gcaacaatat tctgttttta
1440
aaatagggac aagactgttg tcacttttta gacatgtatc ccattccttt tggctctgca
1500
atatttgggg ctgtagctcc ttccaagccc atggtagtcc ctccccgagt ctctcccagt
1560
agaatgcagc ctcccttccc tggccccttc cctctcagtg acggtgactc cctggggcct
1620
tctcgtggaa cccagagggg ctgaggactg tggcctggct ggcgggccag cgtggtgctc
1680
ctcaggactg cagcactgag atggaacctg gcctcagttt aggaacaggg gccacaacag
1740
ggcaggaacc caccaccctc cacataggaa tacaaccagt ggggccacat catgtgaggc
1800
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atcagaccca cactgtcagc ccagcaggcc gggctgtgtc cttcagaccc agtgctgccc
1860
tagactctga ctcgggactc cagcttgcca cgtgccctct cccctcttga atgtactctg
1920
gtcttgcagt gtgctgctgg dactttcttg ctcagccatc actctggtca ccttgtttgc
1980
tctgggtctg gctgaatttt ctgccctgag atctgggcat aaagtggatg aaacttgaaa
2040
gaccttcagt gtagatccag atggccaacc tgtccttgtt aagttacttg cttcttggga
2100
atcagtgtcc cctgctgagc tgaaaaggaa atggattcca atctcttcca acctttaagg
2160
tgatagatag tttgagcaag actggagaat ggacaacact atgaagctgt ggctagaaag
2220
ggactgtcat gtcccatcct ttggccagat tgactgggga tgtccggaca gatgcctgca
2280
tgggtggtga gggccacatc tgcacacgag ccagtggctg cttgcagttc actgctgtga
2340
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2400
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2460
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2520
ttgggtgtct gagcaggcag accagaagac caggcactgg acctgcatgc caaagggact
2580
ggtcatctcc tgaggacctg tacatgaccc tgtggactgt tccgcacgat ccggaaccca
2640
cttttattc actccccatg tctttggcct tcctcttctt tctctttccc tctgccatcc
2700
tgacactgat agtttgtcat ataaattccc cgggttgtgt ttttttttct agaaaaaaat
2760
taaaagggaa aacaaaacca aaaaaccag aaaccacgaa taagaatgga aatgacaatg
2820
gctgcctgtt atttttctgt cacgattttc ctgatttggt ttgttccctt tgtctcagag
2880
aagcaggaga tgttgatgag gctgtatttt tttttctttt tcttgttttt gagacaagag
2940
tctcgctctg tcacccgggc tggagtgtaa cgtggcatga tctcagctca ctgcaacctc
3000
tgcctcctgg gttcaagcga ttatcctgcc tcagcctcct gagtagctgg gattacaggc
3060
atgcgccact atgcccagat aattttttg tattttagt agagacaggg tttcaccatg
3120
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3180
gtgctgggat tataggcatg aaccaccgtg cctggccaaa gatgtaattt aaaatagtta
3240
gaagggactt ggcatgggcc agctccgtgc atggcatttt cacccccaga gcttcctaat
3300
cctgttttca cacaggaagt ttctaggtct ttctagaaca gctagaaata gtagctgact
3360
cccgcccaag gcccaacctt caaaccctga gctcttcagg ctgcatcctc tggtgagcta
3420
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5221

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tagaggagaa cgtggctcct aaactctagc catcctgtgg gaggaaatag acttctttgg
3480
gctgtggctt gcagaacaaa ctacactttt tttccctcta ttgtttaaat tttatttaat
3540
aatttgtgtg ttttctgtc tttattttct gtatttcacg tgttccttca ctccctagaa
3600
actgcactt ctttgaaacc ataggtaatg aatcttacta ggagaggcat ggggatagag
3660
acagttctgg gagtgtgacc tgtaagcctc ctgtagggca gtgccaggcc ttgattgccc
3720
acgttctctc cgttccttct ccttcatac atttgatcac acagcctaca cccagccccg
3780
agtgtgcatc acggtaaaag agctgagggc tctcttcagg gagcagccca tttaggtctc
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3900
aaaaaaaagg
3910
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<210> 6038
<211> 214
<212> PRT
<213> Homo sapiens

<400> 6038

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Lys Gln Pro Xaa Arg Ser Leu Ala Pro Ala Leu Pro Gly Ala Leu Ser
1               5                   10                  15
Ile Thr Ala Leu Cys Thr Ala Leu Ala Glu Pro Ala Trp Leu His Ile
            20                  25                  30
His Gly Gly Thr Cys Ser Arg Gln Glu Leu Gly Val Ser Asp Val Leu
        35                  40                  45
Gly Tyr Val His Pro Asp Leu Leu Lys Asp Phe Cys Met Asn Pro Gln
    50                  55                  60
Thr Val Leu Leu Leu Arg Val Ile Ala Ala Phe Cys Phe Leu Gly Ile
65                  70                  75                  80
Leu Cys Ser Leu Ser Ala Phe Leu Leu Asp Val Phe Gly Pro Lys His
            85                  90                  95
Pro Ala Leu Lys Ile Thr Arg Arg Tyr Ala Phe Ala His Ile Leu Thr
            100                 105                 110
Val Leu Gln Cys Ala Thr Val Ile Gly Phe Ser Tyr Trp Ala Ser Glu
            115                 120                 125
Leu Ile Leu Ala Gln Gln Gln His Lys Lys Tyr His Gly Ser Gln
    130                 135                 140
Val Tyr Val Thr Phe Ala Val Ser Phe Tyr Leu Val Ala Gly Ala Gly
145                 150                 155                 160
Gly Ala Ser Ile Leu Ala Thr Ala Ala Asn Leu Leu Arg His Tyr Pro
            165                 170                 175
Thr Glu Glu Glu Glu Gln Ala Leu Glu Leu Leu Ser Glu Met Glu Glu
            180                 185                 190
Asn Glu Pro Tyr Pro Ala Glu Tyr Glu Val Ile Asn Gln Phe Gln Pro
    195                 200                 205
Pro Pro Ala Tyr Thr Pro
    210
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<210> 6039
<211> 1130
<212> DNA
<213> Homo sapiens

<400> 6039
nncggnttag ctattttgtt tatccatgca gccgcgtggg cctcggaggg gctcctcgcg
60
gtgctgcgcg ccgggccggg gccggaggcg ttactgcagg tctgggcggc cgaatcggcg
120
ctgcgtgggg agccattgtg ggcccagaat gtggtgcccg aggccgaagg ggaagacgat
180
ccggccggtg aggcccaggc tgggaggcta cccctgctgc cctgcgcccg tgcctacgtg
240
agcccgcggg cgcccttcta ccggcctctg gctccggagc tgcgggcacg ccagctggag
300
ctgggcgccg agcacgcgtt gctgctggac gctgctggcc aggtgttctc ctggggcggg
360
ggcaggcatg gacagctggg ccatgggacc ctggaggcag agctggagcc acggctgttg
420
gaggcgttgc agggcctagt catggctgag gtggccgcgg ggggctggca ttctgtgtgt
480
gtgagtgaga ctggggatat ttatatctgg ggctggaatg aatcagggca gctggccctg
540
cccaccagga acctggcaga ggatggagag actgtcgcaa gggaagccac agaactgaat
600
gaagatggtt ctcaggtgaa gagaacgggt ggggctgagg atggagcccc tgccccttc
660
atagctgtcc agcccttccc ggcattactg gatctcccca tgggctcaga tgcagtcaag
720
gccagctgtg gatcccggca cacagctgtg gtgacacgaa caggggagct ctacacctgg
780
ggctggggta aatatggaca gctgggccac gaggacacca ccagcttgga tcggcctcgc
840
cgtgtggaat actttgtaga taagcaactc caagtaaagg ctgtcacctg tgggccgtgg
900
aacacctacg tgtatgctgt ggagaaaggg aagagctgac atgtgtacgt atatgtatat
960
gcaacacctg tgagaccccc attcaggtca aggaaaacca ttgcctgcac cccaagggcc
1020
ccatatttgc ccctccccat cacagtcctg cccttcaccc tcaagcacgg tcctaaactt
1080
gtctgcactt tagaaacacc tggagagcat tgaaaactct gctgcctaag
1130

<210> 6040
<211> 312
<212> PRT
<213> Homo sapiens

<400> 6040
Xaa Gly Leu Ala Ile Leu Phe Ile His Ala Ala Ala Trp Ala Ser Glu
 1               5                   10                  15
Gly Leu Leu Ala Val Leu Arg Ala Gly Pro Gly Pro Glu Ala Leu Leu
```

```
                    20                      25                      30
Gln Val Trp Ala Ala Glu Ser Ala Leu Arg Gly Glu Pro Leu Trp Ala
            35                      40                      45
Gln Asn Val Val Pro Glu Ala Glu Gly Glu Asp Asp Pro Ala Gly Glu
        50                      55                      60
Ala Gln Ala Gly Arg Leu Pro Leu Leu Pro Cys Ala Arg Ala Tyr Val
65                      70                      75                      80
Ser Pro Arg Ala Pro Phe Tyr Arg Pro Leu Ala Pro Glu Leu Arg Ala
                85                      90                      95
Arg Gln Leu Glu Leu Gly Ala Glu His Ala Leu Leu Leu Asp Ala Ala
            100                     105                     110
Gly Gln Val Phe Ser Trp Gly Gly Gly Arg His Gly Gln Leu Gly His
            115                     120                     125
Gly Thr Leu Glu Ala Glu Leu Glu Pro Arg Leu Leu Glu Ala Leu Gln
        130                     135                     140
Gly Leu Val Met Ala Glu Val Ala Ala Gly Gly Trp His Ser Val Cys
145                     150                     155                     160
Val Ser Glu Thr Gly Asp Ile Tyr Ile Trp Gly Trp Asn Glu Ser Gly
                165                     170                     175
Gln Leu Ala Leu Pro Thr Arg Asn Leu Ala Glu Asp Gly Glu Thr Val
            180                     185                     190
Ala Arg Glu Ala Thr Glu Leu Asn Glu Asp Gly Ser Gln Val Lys Arg
            195                     200                     205
Thr Gly Gly Ala Glu Asp Gly Ala Pro Ala Pro Phe Ile Ala Val Gln
        210                     215                     220
Pro Phe Pro Ala Leu Leu Asp Leu Pro Met Gly Ser Asp Ala Val Lys
225                     230                     235                     240
Ala Ser Cys Gly Ser Arg His Thr Ala Val Val Thr Arg Thr Gly Glu
                245                     250                     255
Leu Tyr Thr Trp Gly Trp Gly Lys Tyr Gly Gln Leu Gly His Glu Asp
            260                     265                     270
Thr Thr Ser Leu Asp Arg Pro Arg Arg Val Glu Tyr Phe Val Asp Lys
            275                     280                     285
Gln Leu Gln Val Lys Ala Val Thr Cys Gly Pro Trp Asn Thr Tyr Val
        290                     295                     300
Tyr Ala Val Glu Lys Gly Lys Ser
305                     310
```

<210> 6041
<211> 291
<212> DNA
<213> Homo sapiens

<400> 6041
acgcgtgaag gggaagaaag agaacgtctg caaaaggagg aagagaaacg taggagagaa
60
gaagaggaaa ggcttcgacg ggaggaagag gaaaggagac ggatagaaga agaaaggctt
120
cggttggagc agcaaaagca gcagataatg gcagctttaa actcccagac tgccgtgcag
180
ttccagcagt atgcagccca acagtatcca gggaactacg aacagcagca aattctcatc
240
cgccagttgc aggagcaaca ctatcagcag tacatgcagc agttgtatca c
291

5224

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<210> 6042
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6042
Thr Arg Glu Gly Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
  1               5                  10                  15
Arg Arg Arg Glu Glu Glu Glu Arg Leu Arg Arg Glu Glu Glu Glu Arg
                 20                  25                  30
Arg Arg Ile Glu Glu Glu Arg Leu Arg Leu Glu Gln Gln Lys Gln Gln
            35                  40                  45
Ile Met Ala Ala Leu Asn Ser Gln Thr Ala Val Gln Phe Gln Gln Tyr
    50                  55                  60
Ala Ala Gln Gln Tyr Pro Gly Asn Tyr Glu Gln Gln Gln Ile Leu Ile
65                  70                  75                  80
Arg Gln Leu Gln Glu Gln His Tyr Gln Gln Tyr Met Gln Gln Leu Tyr
                85                  90                  95
His
```

```
<210> 6043
<211> 558
<212> DNA
<213> Homo sapiens

<400> 6043
tttttttttt tttttttttt tttgacattc aaacacaagc tttaatagga gatatcaagg
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cacagggtgg agggaggggg ttgctccagg gaattctgaa tgtcccagtt catgcagaag
120
ttcaaggtgt cttgtacaac ccactgggga aacaggatct gggaccggtg cgggcacatt
180
ctcctggccc agcacagggg cggtgccacc cacattcggc ccgggtcttg cctaatacat
240
gttttggtaa acactcggtc agagcaccct ctgttttttc cagtcccgaa gctccccgca
300
ggaatccaca cccccgcccc accctctcg ggacacggat tcaatgtccc tggtgggtca
360
tctggccttt tcggcctgtg atgtgattcg agcggtgcta tctttaacct cgggcagggg
420
tgttctcccc cgtcgacgtt gctcagataa cagtcctgca attccatggg ggtggcggca
480
cccggggtct ggcaaagcat aggggcctgc ttgtgtcccc tgctgctgcc ccaagtagtc
540
agaggaggat gtgaattc
558
```

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<210> 6044
<211> 152
<212> PRT
<213> Homo sapiens
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<400> 6044
Met Leu Cys Gln Thr Pro Gly Ala Ala Thr Pro Met Glu Leu Gln Asp
 1   5   10   15
Cys Tyr Leu Ser Asn Val Asp Gly Gly Glu His Pro Cys Pro Arg Leu
            20   25   30
Lys Ile Ala Pro Leu Glu Ser His His Arg Pro Lys Arg Pro Asp Asp
        35   40   45
Pro Pro Gly Thr Leu Asn Pro Cys Pro Glu Arg Gly Gly Ala Gly Val
    50   55   60
Trp Ile Pro Ala Gly Ser Phe Gly Thr Gly Lys Asn Arg Gly Cys Ser
65   70   75   80
Asp Arg Val Phe Thr Lys Thr Cys Ile Arg Gln Asp Pro Gly Arg Met
            85   90   95
Trp Val Ala Pro Pro Leu Cys Trp Ala Arg Arg Met Cys Pro His Arg
            100   105   110
Ser Gln Ile Leu Phe Pro Gln Trp Val Val Gln Asp Thr Leu Asn Phe
        115   120   125
Cys Met Asn Trp Asp Ile Gln Asn Ser Leu Glu Gln Pro Pro Pro Ser
        130   135   140
Thr Leu Cys Leu Asp Ile Ser Tyr
145   150

<210> 6045
<211> 1916
<212> DNA
<213> Homo sapiens

<400> 6045
acgcgtgtcg agacgcactt ccagccccgc ggcgctggcg aaggtggccc ctacggctgc
60
aaggacgctc tgcgccagca gctccgctcg cgcgcgagagg tgattgcagt ggtcatggac
120
gtgttcacag acatcgacat cttcagagac ctgcaagaaa tatgcaggaa acagggagtt
180
gctgtgtata tccttctgga ccaggctctc ctctctcaat ttctggatat gtgcatggat
240
ctgaaagttc atcctgaaca ggaaaagtta atgacagttc ggactatcac aggaaatatc
300
tactatgcaa ggtcaggaac taagattatt gggaaggttc acgaaaagtt cacgttgatt
360
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420
agcagtaact tggtaattct gtctggccaa gtggttgaac actttgatct ggagttccga
480
atcctgtatg cccagtccaa gcccatcagc cccaaactcc tgtctcactt ccagagcagc
540
aacaagtttg atcacctcac caaccgaaaa ccacagtcca aggagctcac cctgggcaac
600
ctgctgcgga tgcggctggc taggctgtca agtactccca ggaaggcgga cctggaccca
660
gagatgcccg cagagggcaa ggcagagcgc aagccccatg actgtgagtc ctctactgtt
720
agtgaggaag actacttcag cagccacagg gacgagctcc agagcagaaa ggccattgac
780

gctgccactc aaacagagcc aggagaggag atgccagggc tgagtgtgag tgaggtggga
840
acacaaacca gcatcaccac agcatgtgct ggtacccaga ctgcagtcat caccaggata
900
gcaagctctc aaaccacgat ttggtccaga tcgaccacta ctcagactga catggatgag
960
aacattctct ttcctcgagg aactcaatct acagaagggt caccagtctc aaaaatgtct
1020
gtatcgagat cttccagttt gaagtcttcc tcctctgtgt cttcccaagg ctctgtggca
1080
agctccactg gttctcccgc ttccatcaga accactgact tccacaatcc tggctatccc
1140
aagtacctgg gcacccccca cctggaactg tacttgagtg actcacttag aaacttgaac
1200
aaagagcggc aattccactt cgctggtatc aggtcccggc tcaaccacat gctggctatg
1260
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1320
agagttaatt tgcttgctgt tagagatgta gcactttatc cttcctatca gtaactgctc
1380
cgtgttcaga ctcctggttt cttccaggct tacagtggac atcatcagct tcctgcttta
1440
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1500
ttgaattctt taggctgcat attattttac atgctttgtt ttgtcatgta tataccaggt
1560
attggtttta tggtttaaac actatggata caggggtttg ttttgcacaa ttttaatagt
1620
catgcactac ataatgatgt tttggtcaat gacagaccac gtatatgttg gcagtctcat
1680
aagattataa tactgtattt ttactatacc ttttctgtgt ttagatacaa ataccattat
1740
gttacagttg cctacagtat tcagtgcagt aacatgatgt acaggtttgt agcctgtttt
1800
gcatttttct taggttgtat gctcttctgt tttaaaggtt tgaatcacca gcattttgt
1860
gatcaaaatc ctatttagaa aaaataaaac tactttctgt ttaaaaaaaa aacaaa
1916

<210> 6046
<211> 457
<212> PRT
<213> Homo sapiens

<400> 6046
Thr Arg Val Glu Thr His Phe Gln Pro Arg Gly Ala Gly Glu Gly Gly
1   5   10   15
Pro Tyr Gly Cys Lys Asp Ala Leu Arg Gln Gln Leu Arg Ser Ala Arg
            20   25   30
Glu Val Ile Ala Val Val Met Asp Val Phe Thr Asp Ile Asp Ile Phe
            35   40   45
Arg Asp Leu Gln Glu Ile Cys Arg Lys Gln Gly Val Ala Val Tyr Ile
        50   55   60
Leu Leu Asp Gln Ala Leu Leu Ser Gln Phe Leu Asp Met Cys Met Asp

5227

```
   65                    70                    75                    80
Leu Lys Val His Pro Glu Gln Glu Lys Leu Met Thr Val Arg Thr Ile
                 85                    90                    95
Thr Gly Asn Ile Tyr Tyr Ala Arg Ser Gly Thr Lys Ile Ile Gly Lys
                100                   105                   110
Val His Glu Lys Phe Thr Leu Ile Asp Gly Ile Arg Val Ala Thr Gly
            115                   120                   125
Ser Tyr Ser Phe Thr Trp Thr Asp Gly Lys Leu Asn Ser Ser Asn Leu
    130                   135                   140
Val Ile Leu Ser Gly Gln Val Val Glu His Phe Asp Leu Glu Phe Arg
145                   150                   155                   160
Ile Leu Tyr Ala Gln Ser Lys Pro Ile Ser Pro Lys Leu Leu Ser His
            165                   170                   175
Phe Gln Ser Ser Asn Lys Phe Asp His Leu Thr Asn Arg Lys Pro Gln
            180                   185                   190
Ser Lys Glu Leu Thr Leu Gly Asn Leu Leu Arg Met Arg Leu Ala Arg
        195                   200                   205
Leu Ser Ser Thr Pro Arg Lys Ala Asp Leu Asp Pro Glu Met Pro Ala
    210                   215                   220
Glu Gly Lys Ala Glu Arg Lys Pro His Asp Cys Glu Ser Ser Thr Val
225                   230                   235                   240
Ser Glu Glu Asp Tyr Phe Ser Ser His Arg Asp Glu Leu Gln Ser Arg
                245                   250                   255
Lys Ala Ile Asp Ala Ala Thr Gln Thr Glu Pro Gly Glu Glu Met Pro
            260                   265                   270
Gly Leu Ser Val Ser Glu Val Gly Thr Gln Thr Ser Ile Thr Thr Ala
        275                   280                   285
Cys Ala Gly Thr Gln Thr Ala Val Ile Thr Arg Ile Ala Ser Ser Gln
        290                   295                   300
Thr Thr Ile Trp Ser Arg Ser Thr Thr Thr Gln Thr Asp Met Asp Glu
305                   310                   315                   320
Asn Ile Leu Phe Pro Arg Gly Thr Gln Ser Thr Glu Gly Ser Pro Val
            325                   330                   335
Ser Lys Met Ser Val Ser Arg Ser Ser Ser Leu Lys Ser Ser Ser Ser
            340                   345                   350
Val Ser Ser Gln Gly Ser Val Ala Ser Ser Thr Gly Ser Pro Ala Ser
        355                   360                   365
Ile Arg Thr Thr Asp Phe His Asn Pro Gly Tyr Pro Lys Tyr Leu Gly
    370                   375                   380
Thr Pro His Leu Glu Leu Tyr Leu Ser Asp Ser Leu Arg Asn Leu Asn
385                   390                   395                   400
Lys Glu Arg Gln Phe His Phe Ala Gly Ile Arg Ser Arg Leu Asn His
            405                   410                   415
Met Leu Ala Met Leu Ser Arg Arg Thr Leu Phe Thr Glu Asn His Leu
            420                   425                   430
Gly Leu His Ser Gly Asn Phe Ser Arg Val Asn Leu Leu Ala Val Arg
        435                   440                   445
Asp Val Ala Leu Tyr Pro Ser Tyr Gln
    450                   455
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<210> 6047
<211> 773
<212> DNA
<213> Homo sapiens
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<400> 6047
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ccaccgtgtg gccacagcgt ctcctagcgg cctccttacc taggggtcgg gtgagctcct
120
gatgggaaat gggggatctc atcgcttgtg agtagaggag actttggggg gaaagtgatg
180
gaggatgggg caagggatcc ggtgtccaac tctgtgtgtc cctgcagctc ccgtagccca
240
gcagggaaga tgaccttctg gcccctaagc aggcggaagg caggtggccg ccgccggagc
300
aatggtgcaa acagctcttc tccagtgtgg tccccgtgct gctgggggac ccagaggagg
360
agccgggtgg gcggcagctc ctggacctca attgcttttt gtccgacatc tcggacactc
420
tcttcaccat gactcagtcc ggcccttcgc ccctgcagct gccgcctgag gatgcctacg
480
tcggcaatgc tgacatgatc cagccggacc tgacgccact gcagccaagc ctggatgact
540
tcatggacat ctcagatttc tttaccaact cccgcctccc acagccgccc atgccttcaa
600
acttcccaga gccccccaac ttcagccccg tggttgactc cctcttcagc agtgggaccc
660
tgggcccaga ggtgcccccg gcttcctcgg ccatgaccca cctctctgga cacagccgtc
720
tgcaggctcg gaacagctgc cctgcccctg tgcctgctac taaatgaatt gcg
773

<210> 6048
<211> 129
<212> PRT
<213> Homo sapiens

<400> 6048
Met Val Lys Arg Val Ser Glu Met Ser Asp Lys Lys Gln Leu Arg Ser
1   5   10   15
Arg Ser Cys Arg Pro Pro Gly Ser Ser Ser Gly Ser Pro Ser Ser Thr
            20   25   30
Gly Thr Thr Leu Glu Lys Ser Cys Leu His His Cys Ser Gly Gly Gly
            35   40   45
His Leu Pro Ser Ala Cys Leu Gly Ala Arg Arg Ser Ser Ser Leu Leu
        50   55   60
Gly Tyr Gly Ser Cys Arg Asp Thr Gln Ser Trp Thr Pro Asp Pro Leu
65   70   75   80
Pro His Pro Pro Ser Leu Ser Pro Gln Ser Leu Leu Tyr Ser Gln Ala
                85   90   95
Met Arg Ser Pro Ile Ser His Gln Glu Leu Thr Arg Pro Leu Gly Lys
            100   105   110
Glu Ala Ala Arg Arg Arg Cys Gly His Thr Val Ala Leu Ser Ala Arg
        115   120   125
Asp

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<210> 6049
<211> 479
<212> DNA
<213> Homo sapiens

<400> 6049
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60
actgatggta ataccagcac cactccgccc acctctgcca agaagagaaa gttaaacagc
120
agcagcagta gcagcagtaa cagtagtaac gagagagaag actttgattc cacctcttcc
180
tcctcttcca ctcctccttt acaacccagg gattcggcat ccccttcaac ctcgtccttc
240
tgcctggggg tttcagtggc tgcttccagc cacgtaccga tacagaagaa gctgcgtttt
300
gaagacaccc tggagtttgt agggtttgat gcgaagatgg ctgaggaatc ctcctcctcc
360
tcctcctcat cttcaccaac tgctgcaaca tctcaggagc agcaacttaa aaataagagt
420
atattaatct cttctgtggg ttcggtgcat catgcagacg ggctagccga atcttctac
479

<210> 6050
<211> 159
<212> PRT
<213> Homo sapiens

<400> 6050
Thr Gly Phe Ser Ser Pro Ser Pro Ser Ala Ala Ala Ala Ala Gln Glu
 1               5                  10                  15
Val Arg Ser Ala Thr Asp Gly Asn Thr Ser Thr Thr Pro Pro Thr Ser
            20                  25                  30
Ala Lys Lys Arg Lys Leu Asn Ser Ser Ser Ser Ser Ser Ser Asn Ser
        35                  40                  45
Ser Asn Glu Arg Glu Asp Phe Asp Ser Thr Ser Ser Ser Ser Ser Thr
    50                  55                  60
Pro Pro Leu Gln Pro Arg Asp Ser Ala Ser Pro Ser Thr Ser Ser Phe
65                  70                  75                  80
Cys Leu Gly Val Ser Val Ala Ala Ser Ser His Val Pro Ile Gln Lys
                85                  90                  95
Lys Leu Arg Phe Glu Asp Thr Leu Glu Phe Val Gly Phe Asp Ala Lys
            100                 105                 110
Met Ala Glu Glu Ser Ser Ser Ser Ser Ser Ser Ser Ser Pro Thr Ala
        115                 120                 125
Ala Thr Ser Gln Glu Gln Gln Leu Lys Asn Lys Ser Ile Leu Ile Ser
    130                 135                 140
Ser Val Gly Ser Val His His Ala Asp Gly Leu Ala Glu Ser Ser
145                 150                 155

<210> 6051
<211> 2404
<212> DNA
<213> Homo sapiens
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<400> 6051
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tttcttccat cggttgatcc tgaaacagtt cttcagacag ggcatgaatt gttgtccgaa
120
ttacagcagc gtcgatttaa tggctcagac ggaggggttt catggtctcc tatggatgat
180
gaacttcttg cacagccaca ggttatgaaa ttattagatt cactccgaga gcaatatacc
240
cgctaccagg aagtttgtag gcaacgtagc aagcgcacac agttagaaga gattcaacag
300
aaggtaatgc aggtggtgaa ctggctagaa gggcctggat cagaacaact aagagcccag
360
tggggcattg gagactccat tagggcctcc caggccctac agcagaaaca cgaagagatt
420
gagagccagc acagtgaatg gtttgcagtg tatgtggaac ttaatcagca aattgcagca
480
ctcttgaatg ctggcgatga ggaagatctt gtggaactaa agtcactgca gcaacaactt
540
agtgatgttt gttatcgaca ggccagtcag ctggaattta ggcaaaatct cttacaagca
600
gctcttgaat ttcatggtgt tgcccaagat ttgtctcagc agttggatgg cttattaggg
660
atgttgtgcg tagatgtagc accagctgat ggagcatcga ttcagcaaac tttaaaactg
720
cttgaagaga agctgaaaag tgttgatgtg ggattgcaag gtttgcgtga aaaaggtcaa
780
ggtctcctgg atcagatctc caatcaggca tccnntgggc ctatggaaag gatgntaacc
840
attgaaaata aagaaaatgt ggaccacata caaggagtga tggaagatat gcagcttaga
900
aaacaaagat gtgaagacat ggtagatgtg cgaaggttaa agatgcttca gatggtgcag
960
ttgtttaaat gtgaagaaga tgctgccaag gcagtagaat ggctaagtga acttctggat
1020
gctctgctta agactcacat cagattgggc gatgatgctc aagaaacgaa agttttgctg
1080
gaaaagcata gaaaatttgt tgatgttgca cagagcactt atgactatgg caggcagttg
1140
ctacaggcca cagttgtgtt atgccagtct ttgcgctgca cttctcggtc atctggggat
1200
acacttcctc gactgaacag agtatggaaa caatttacaa tagcatctga agagagagta
1260
catagattgg aaatggctat tgcatttcac tcaaatgctg aaaagatttt gcaggactgt
1320
ccagaagagc ctgaagctat taatgatgag gagcaatttg atgaaattga agcagttggg
1380
aaatcacttt tggatagatt aactgttcca gtagtttatc ctgatggaac cgaacaatat
1440
tttgggagtc caagtgacat ggcttctact gcagaaaaca tcagagacag gatgaaacta
1500
gttaatctca aaaggcagca gctgagacat cctgaaatgg tgaccacaga gagctaatag
1560
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ctaccagcta cctacagatt tgcagttcat aatcccgcat gttgtcaaca tactacagca
1620
ttagccacca caccttaaga tgcatttcac agccaaaata agtctcattt cttttcatga
1680
cacatttctc tttacatgtt aacaccttgc tactaccaag gcataattac ttaacatgct
1740
tcgaggctgt agattccaag tatcttaaaa gaaggaacta taaacattgc actgaaaact
1800
tgctttaaag ctttacctga cctgtcagtt tgtagacaaa caactgataa taagctttga
1860
atggtgctaa taagagtagg aattctctct attaaaaaga aaaaaaaaag ttgcccttcc
1920
tccacaggtg atttagtaaa tttagacagt agttaaactc ttgttagtag acagtggtgt
1980
cctcaaaatt ttactttgta attcttcaga attgattatt tttattgtgt caatacagag
2040
aaagcctttc agatctttga tatatcatag tcattaaaag accttttcct atttgtattg
2100
ataatgtatt aaaagttgtt tgtgcttaat aaaagacttc tttaaacatc ttatttaatt
2160
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2220
gtgaggatgg tttaatattt gttttttcat ggtggttgca tgtattttag acaggaaata
2280
catatgtaag catgtgtata taataaataa gcatgtttta tcatgaaaaa ttattgtgaa
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2400
caac
2404

<210> 6052
<211> 518
<212> PRT
<213> Homo sapiens

<400> 6052
Ile Asn Asn Gly Ser Asp Lys Gly Asn Gln Gln Glu Lys Glu Arg Ser
1   5   10   15
Val Asp Leu Asn Phe Leu Pro Ser Val Asp Pro Glu Thr Val Leu Gln
            20   25   30
Thr Gly His Glu Leu Leu Ser Glu Leu Gln Gln Arg Arg Phe Asn Gly
        35   40   45
Ser Asp Gly Gly Val Ser Trp Ser Pro Met Asp Asp Glu Leu Leu Ala
    50   55   60
Gln Pro Gln Val Met Lys Leu Leu Asp Ser Leu Arg Glu Gln Tyr Thr
65   70   75   80
Arg Tyr Gln Glu Val Cys Arg Gln Arg Ser Lys Arg Thr Gln Leu Glu
                85   90   95
Glu Ile Gln Gln Lys Val Met Gln Val Val Asn Trp Leu Glu Gly Pro
            100   105   110
Gly Ser Glu Gln Leu Arg Ala Gln Trp Gly Ile Gly Asp Ser Ile Arg
        115   120   125
Ala Ser Gln Ala Leu Gln Gln Lys His Glu Glu Ile Glu Ser Gln His

5232

```
        130                    135                    140
Ser Glu Trp Phe Ala Val Tyr Val Glu Leu Asn Gln Gln Ile Ala Ala
145                    150                    155                    160
Leu Leu Asn Ala Gly Asp Glu Glu Asp Leu Val Glu Leu Lys Ser Leu
                165                    170                    175
Gln Gln Gln Leu Ser Asp Val Cys Tyr Arg Gln Ala Ser Gln Leu Glu
                180                    185                    190
Phe Arg Gln Asn Leu Leu Gln Ala Ala Leu Glu Phe His Gly Val Ala
                195                    200                    205
Gln Asp Leu Ser Gln Gln Leu Asp Gly Leu Leu Gly Met Leu Cys Val
        210                    215                    220
Asp Val Ala Pro Ala Asp Gly Ala Ser Ile Gln Gln Thr Leu Lys Leu
225                    230                    235                    240
Leu Glu Glu Lys Leu Lys Ser Val Asp Val Gly Leu Gln Gly Leu Arg
                245                    250                    255
Glu Lys Gly Gln Gly Leu Leu Asp Gln Ile Ser Asn Gln Ala Ser Xaa
                260                    265                    270
Gly Pro Met Glu Arg Met Xaa Thr Ile Glu Asn Lys Glu Asn Val Asp
        275                    280                    285
His Ile Gln Gly Val Met Glu Asp Met Gln Leu Arg Lys Gln Arg Cys
        290                    295                    300
Glu Asp Met Val Asp Val Arg Arg Leu Lys Met Leu Gln Met Val Gln
305                    310                    315                    320
Leu Phe Lys Cys Glu Glu Asp Ala Ala Lys Ala Val Glu Trp Leu Ser
                325                    330                    335
Glu Leu Leu Asp Ala Leu Leu Lys Thr His Ile Arg Leu Gly Asp Asp
        340                    345                    350
Ala Gln Glu Thr Lys Val Leu Leu Glu Lys His Arg Lys Phe Val Asp
        355                    360                    365
Val Ala Gln Ser Thr Tyr Asp Tyr Gly Arg Gln Leu Leu Gln Ala Thr
        370                    375                    380
Val Val Leu Cys Gln Ser Leu Arg Cys Thr Ser Arg Ser Ser Gly Asp
385                    390                    395                    400
Thr Leu Pro Arg Leu Asn Arg Val Trp Lys Gln Phe Thr Ile Ala Ser
                405                    410                    415
Glu Glu Arg Val His Arg Leu Glu Met Ala Ile Ala Phe His Ser Asn
                420                    425                    430
Ala Glu Lys Ile Leu Gln Asp Cys Pro Glu Glu Pro Glu Ala Ile Asn
        435                    440                    445
Asp Glu Glu Gln Phe Asp Glu Ile Glu Ala Val Gly Lys Ser Leu Leu
        450                    455                    460
Asp Arg Leu Thr Val Pro Val Val Tyr Pro Asp Gly Thr Glu Gln Tyr
465                    470                    475                    480
Phe Gly Ser Pro Ser Asp Met Ala Ser Thr Ala Glu Asn Ile Arg Asp
                485                    490                    495
Arg Met Lys Leu Val Asn Leu Lys Arg Gln Gln Leu Arg His Pro Glu
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Met Val Thr Thr Glu Ser
        515
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<210> 6053
<211> 3257
<212> DNA
<213> Homo sapiens
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<400> 6053

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120
ttgggtctcc gtggttcagg ccggctcccc cttcctggtc tcccttctcc cgctgggccg
180
gtttatcggg aggagattgt cttccagggc tagcaattgg acttttgatg atgtttgacc
240
cagcggcagg aatagcaggc aacgtgattt caaagctggg ctcagcctct gtttcttctc
300
tcgtgtaatc gcaaacccca ttttggagca ggaattccaa tcatgtctgt gatggtggtg
360
agaaagaagg tgacacggaa atgggagaaa ctcccaggca ggaacacctt ttgctgtgat
420
ggccgcgtca tgatggcccg gcaaaagggc atttctaccg tgaccctttt cctcatcctg
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540
gccatccctg tatttgctgc catgctcttc cttttctcca tggctacact gttgaggacc
600
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660
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720
aagaatttcc agataaacaa ccagattgtg aaactgaaat actgttacac atgcaagatc
780
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1140
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1260
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1320
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1380
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1440
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1560

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1680
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1740
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1860
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1920
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1980
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2100
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2160
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2220
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2280
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2400
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2460
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2520
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gactatgaag aaaggacttt caaggagata tagtgtgaac aggatcagga aggtagaggg
3120
attatattta cttaagagaa caagctctat attaggatat tgttttgaag cagatggatg
3180
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3240
aaatatttga tcagtgg
3257

<210> 6054
<211> 382
<212> PRT
<213> Homo sapiens

<400> 6054
Leu Phe Leu Leu Ser Cys Asn Arg Lys Thr His Phe Gly Ala Gly Ile
1   5   10   15
Pro Ile Met Ser Val Met Val Val Arg Lys Lys Val Thr Arg Lys Trp
            20   25   30
Glu Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met
        35   40   45
Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile Leu
    50   55   60
Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu Ala Val
65   70   75   80
Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu Phe Leu Phe
            85   90   95
Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp Pro Gly Val Ile
            100   105   110
Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile Glu Met Glu Ile Glu
        115   120   125
Ala Thr Asn Gly Ala Val Pro Gln Gly Gln Arg Pro Pro Pro Arg Ile
    130   135   140
Lys Asn Phe Gln Ile Asn Asn Gln Ile Val Lys Leu Lys Tyr Cys Tyr
145   150   155   160
Thr Cys Lys Ile Phe Arg Pro Pro Arg Ala Ser His Cys Ser Ile Cys
                165   170   175
Asp Asn Cys Val Glu Arg Phe Asp His His Cys Pro Trp Val Gly Asn
            180   185   190
Cys Val Gly Lys Arg Asn Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser
        195   200   205
Leu Ser Leu Leu Thr Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val
    210   215   220
Ala Leu Lys Ser Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr
225   230   235   240
Pro Gly Thr Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser
            245   250   255
Val Val Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln
            260   265   270
Thr Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val
        275   280   285
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu Val
        290   295   300
Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly Ile Leu
305   310   315   320
Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln Glu Thr Ser
            325   330   335
Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu His Leu Asn Ser

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              340               345               350
Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu Glu Met Pro Pro Pro
         355               360               365
Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala Glu Ala Glu Lys
    370               375               380
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<210> 6055
<211> 2089
<212> DNA
<213> Homo sapiens

<400> 6055
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120
gcttacaata accagtcaaa cagattggct gtttcacgaa cagatggcac tgtggaaatt
180
tataacttgt cagcaaacta ctttcaggag aaattttttcc caggtcatga gtctcgggct
240
acagaagctt tgtgctgggc agaaggacag cgactcttta gtgctgggct caatggcgag
300
attatggagt atgatttaca ggcgttaaac atcaagtatg ctatggatgc ctttggagga
360
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<210> 6056
<211> 285
<212> PRT
<213> Homo sapiens

<400> 6056
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            20                  25                  30
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          35                  40                  45
Leu Ala Val Ser Arg Thr Asp Gly Thr Val Glu Ile Tyr Asn Leu Ser
      50                  55                  60
Ala Asn Tyr Phe Gln Glu Lys Phe Phe Pro Gly His Glu Ser Arg Ala
65                  70                  75                  80
Thr Glu Ala Leu Cys Trp Ala Glu Gly Gln Arg Leu Phe Ser Ala Gly
                85                  90                  95
Leu Asn Gly Glu Ile Met Glu Tyr Asp Leu Gln Ala Leu Asn Ile Lys
            100                 105                 110
Tyr Ala Met Asp Ala Phe Gly Gly Pro Ile Trp Ser Met Ala Ala Ser
            115                 120                 125
Pro Ser Gly Ser Gln Leu Leu Val Gly Cys Glu Asp Gly Ser Val Lys
      130                 135                 140
Leu Phe Gln Ile Thr Pro Asp Lys Ile Gln Phe Glu Arg Asn Phe Asp
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145                      150                     155                     160
Arg Gln Lys Ser Arg Ile Leu Ser Leu Ser Trp His Pro Ser Gly Thr
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His Ile Ala Ala Gly Ser Ile Asp Tyr Ile Ser Val Phe Asp Val Lys
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Ser Gly Ser Ala Val His Lys Met Ile Val Asp Arg Gln Tyr Met Gly
            195                     200                     205
Val Ser Lys Arg Lys Cys Ile Val Trp Gly Val Ala Phe Leu Ser Asp
        210                     215                     220
Gly Thr Ile Ile Ser Val Asp Ser Ala Gly Lys Val Gln Phe Trp Asp
225                     230                     235                     240
Ser Ala Thr Gly Thr Leu Val Lys Ser His Leu Ile Ala Asn Ala Asp
                245                     250                     255
Val Gln Ser Ile Ala Val Ala Asp Gln Glu Asp Ser Phe Val Val Gly
            260                     265                     270
Thr Ala Arg Glu Gln Ser Ser Ile Phe Ser Trp Ser Leu
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<210> 6057
<211> 3924
<212> DNA
<213> Homo sapiens

<400> 6057

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<210> 6058
<211> 500
<212> PRT
<213> Homo sapiens
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<400> 6058
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Pro Ser Ser Thr Lys Val Leu Thr Ser Ser Leu Lys Ser Ser Leu Asn
            20                  25                 30
Phe Glu Lys His Ser Glu Asn Phe Ala Trp Thr Glu Asn Arg Tyr Asp
        35                  40                  45
Val Asn Arg Arg Arg His Asn Ser Ser Asp Gly Phe Asp Ser Ala Ile
    50                  55                  60
Gly Arg Pro Asn Gly Gly Asn Phe Gly Arg Lys Glu Lys Asn Gly Trp
65                  70                  75                  80
Arg Thr His Gly Arg Asn Gly Thr Glu Asn Ile Asn His Arg Gly Gly
                85                  90                  95
Tyr His Gly Gly Ser Ser Arg Ser Arg Ser Ser Ile Phe His Ala Gly
            100                 105                 110
Lys Ser Gln Gly Leu His Glu Asn Asn Ile Pro Asp Asn Glu Thr Gly
    115                 120                 125
Arg Lys Glu Asp Lys Arg Glu Arg Lys Gln Phe Glu Ala Glu Asp Phe
    130                 135                 140
Pro Ser Leu Asn Pro Glu Tyr Glu Arg Glu Pro Asn His Asn Lys Ser
145                 150                 155                 160
Leu Ala Ala Gly Val Trp Gly Leu His Ala Gln Thr His Thr Tyr Pro
                165                 170                 175
Thr Lys Lys Ile Ser Gln Ala Pro Leu Leu Glu Tyr Pro Pro Asn Pro
            180                 185                 190
Lys Ser Arg Ala Pro Arg Met Leu Val Ile Lys Lys Gly Asn Thr Lys
    195                 200                 205
Asp Leu Gln Leu Ser Gly Phe Pro Val Val Gly Asn Leu Pro Ser Gln
    210                 215                 220
Pro Val Lys Asn Gly Thr Gly Pro Ser Val Tyr Lys Gly Leu Val Pro
225                 230                 235                 240
Lys Pro Ala Ala Pro Pro Thr Lys Pro Thr Gln Trp Lys Ser Gln Thr
                245                 250                 255
Lys Glu Asn Lys Val Gly Thr Ser Phe Pro His Glu Ser Thr Phe Gly
            260                 265                 270
Val Gly Asn Phe Asn Ala Phe Lys Ser Thr Ala Lys Asn Phe Ser Pro
    275                 280                 285
Ser Thr Asn Ser Val Lys Glu Cys Asn Arg Ser Asn Ser Ser Ser Pro
    290                 295                 300
Val Asp Lys Leu Asn Gln Gln Pro Arg Leu Thr Lys Leu Thr Arg Met
305                 310                 315                 320
Arg Thr Asp Lys Lys Ser Glu Phe Leu Lys Ala Leu Lys Arg Asp Arg
                325                 330                 335
Val Glu Glu Glu His Glu Asp Glu Ser Arg Ala Gly Ser Glu Lys Asp
            340                 345                 350
Asp Asp Ser Phe Asn Leu His Asn Ser Asn Ser Thr His Gln Glu Arg
    355                 360                 365
Asp Ile Asn Arg Asn Phe Asp Glu Asn Glu Ile Pro Gln Glu Asn Gly
    370                 375                 380
Asn Ala Ser Val Ile Ser Gln Gln Ile Ile Arg Ser Ser Thr Phe Pro
385                 390                 395                 400
Gln Thr Asp Val Leu Ser Ser Ser Leu Glu Ala Glu His Arg Leu Leu
                405                 410                 415
Lys Glu Met Gly Trp Gln Glu Asp Ser Glu Asn Asp Glu Thr Cys Ala
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```
              420                   425                   430
Pro Leu Thr Glu Asp Glu Met Arg Glu Phe Gln Val Ile Ser Glu Gln
          435                   440                   445
Leu Gln Lys Asn Gly Leu Arg Lys Asn Gly Ile Leu Lys Asn Gly Leu
      450                   455                   460
Ile Cys Asp Phe Lys Phe Gly Pro Trp Lys Asn Ser Thr Phe Lys Pro
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Thr Thr Glu Asn Asp Asp Thr Glu Thr Ser Ser Ser Asp Thr Ser Asp
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Asp Asp Asp Val
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<210> 6059
<211> 1442
<212> DNA
<213> Homo sapiens

<400> 6059

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1020
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1080
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1260
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1440
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1442
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<210> 6060
<211> 313
<212> PRT
<213> Homo sapiens

<400> 6060

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Phe Ser Asp Arg Ala Trp Leu Gln Met Pro Leu Phe Val Val Leu Leu
            20                  25                  30
Ile Ser Tyr Thr Ile Thr Ile Phe Gly Asn Val Ser Ile Met Met Val
           35                  40                  45
Cys Ile Leu Asp Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
        50                  55                  60
Asn Leu Ser Ile Leu Asp Leu Cys Tyr Thr Thr Thr Thr Val Pro His
65                  70                  75                  80
Met Leu Val Asn Ile Gly Cys Asn Lys Lys Thr Ile Ser Tyr Ala Gly
                85                  90                  95
Cys Val Ala His Leu Ile Ile Phe Leu Ala Leu Gly Ala Thr Glu Cys
               100                 105                 110
Leu Leu Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Arg
           115                 120                 125
Pro Leu His Tyr Val Val Ile Met Asn Tyr Trp Phe Cys Leu Arg Met
        130                 135                 140
Ala Ala Phe Ser Trp Leu Ile Gly Phe Gly Asn Ser Val Leu Gln Ser
145                 150                 155                 160
Ser Leu Thr Leu Asn Met Pro Arg Cys Gly His Gln Glu Val Asp His
               165                 170                 175
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
               180                 185                 190
Lys Pro Ile Glu Ala Glu Leu Phe Phe Phe Ser Val Leu Ile Leu Leu
           195                 200                 205
Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Gly Phe Ile Ala Gln Ala
        210                 215                 220
Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
225                 230                 235                 240
Cys Gly Ser His Met Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
               245                 250                 255
Tyr Met Tyr Leu Gln Pro Pro Ser Ser Thr Ser Lys Asp Trp Gly Lys
```

```
                260                    265                    270
Met Val Ser Leu Phe Tyr Gly Ile Ile Thr Ser Met Leu Asn Ser Leu
            275                    280                    285
Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Glu Ala Phe Lys Arg Leu
        290                    295                    300
Met Pro Arg Ile Phe Phe Cys Lys Lys
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<210> 6061
<211> 1582
<212> DNA
<213> Homo sapiens
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<400> 6061
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1200
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<210> 6062
<211> 226
<212> PRT
<213> Homo sapiens

<400> 6062
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            20                  25                  30
Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro Ile Val Asp
        35                  40                  45
Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser Glu Leu Glu Leu
    50                  55                  60
Asp Asp Val Val Ile Thr Asn Pro His Ile Glu Ala Ile Leu Glu Asn
65                  70                  75                  80
Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu Met Ser His Cys Ile Ala
            85                  90                  95
Ile Leu Lys Ile Cys His Thr Leu Thr Glu Lys Leu Val Ala Met Thr
            100                 105                 110
Met Gly Ser Gly Ala Lys Met Lys Thr Ser Ala Ser Val Ser Asp Ile
            115                 120                 125
Ile Val Val Ala Lys Arg Ile Ser Pro Arg Val Asp Asp Val Val Lys
    130                 135                 140
Ser Met Tyr Pro Pro Leu Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr
145                 150                 155                 160
Ala Leu Leu Leu Ser Val Ser His Leu Val Leu Val Thr Arg Asn Ala
                165                 170                 175
Cys His Leu Thr Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala
            180                 185                 190
Ala Glu Glu His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu
            195                 200                 205
Pro Asp Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser
    210                 215                 220
Ala Ile
225
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<210> 6063
<211> 2286

<212> DNA
<213> Homo sapiens

<400> 6063
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120
ggcggcgctg agcggctggt gttggacgcg gcgctggcgc tgcaggcgcg cgggtgtagc
180
gtgaagatct ggacagcgca ctacgacccg ggccactgtt tcgccgagag ccgcgagcta
240
ccggtgcgct gtgccgggga ctggctgccg cgaggcctgg gctggggcgg ccgcggcgcc
300
gccgtctgcg cctacgtgcg catggttttc ctggcgctct acgtgctgtt cctcgccgac
360
gaggagttcg acgtggtagt gtgcgaccag gtgtctgcct gtatcccagt gttcaggctg
420
gctagacggc ggaagaagat cctattttac tgtcacttcc cagatctgct tctcaccaag
480
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540
acaggcatgg cagactgcat cttagtcaac agccagttca cagctgctgt ttttaaggaa
600
acattcaagt ccctgtctca catagaccct gatgtcctct atccatctct aaatgtcacc
660
agctttgact cagttgttcc tgaannaagc tggatgacct agtccccaag gggaaaaaaa
720
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780
gccctagtac agctgcgtgg aagattgaca tcccaagatt gggagagagt tcatctgatc
840
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900
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960
aaacagaaaa tctccctcct ccacagctgc acgtgtgtgc tttacacacc aagcaatgag
1020
cactttggca ttgtccctct ggaagccatg tacatgcagt gcccagtcat tgctgttaat
1080
tcgggtggac ccttggagtc cattgaccac agtgtcacag ggtttctgtg tgagcctgac
1140
ccggtgcact ctcagaagc aatagaaaag ttcatccgtg aaccttcctt aaaagccacc
1200
atgggcctgg ctggaagagc cagagtgaag gaaaaatttt cccctgaagc atttacagaa
1260
cagctctacc gatatgttac caaactgctg gtataatcag attgttttta agatctccat
1320
taatgtcatt tttatggatt gtagacccag ttttgaaacc aaaaaagaaa cctagaatct
1380
aatgcagaag agatctttta aaaaataaac ttgagtcttg aatgtgagcc actttcctat
1440
ataccacacc tccctgtcca cttttcagaa aaaccatgtc ttttatgcta taatcattcc
1500

aaattttgcc agtgttaagt tacaaatgtg gtgtcattcc atgttcagca gagtatttta
1560
attatatttt ctcgggatta ttgctcttct gtctataaat tttgaatgat actgtgcctt
1620
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1680
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1740
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1800
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1860
aaaaaagaaa cagtattaga ttttggtctc cataatctat tttggtattg ttacgaacat
1920
ggatatgaca accaaactgg aaatcagaac actagggtaa agtggatatt gaaatgaagc
1980
aagaatattg tcacacatgt gttgtgcatc ttgtttaggg tatatttctt aatgtcatct
2040
aggtcattag ttttgttaat atttgtgttg tcttgaccaa gctcctacta agtataggac
2100
acaaatgttt tttatcttcc aaggcctggc tcaaatgcca ctgctgcaaa gctttctttg
2160
accctctggc cacctcccaa gccagaagtt atcttccccc tccatgtact ctagcctttt
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2280
acagca
2286

<210> 6064
<211> 233
<212> PRT
<213> Homo sapiens

<400> 6064
Xaa Arg Val Lys Gly Ala Gly Cys Ser Cys Gly Ser Arg Ala Met Ala
 1   5   10   15
Glu Glu Gln Gly Arg Glu Arg Asp Ser Val Pro Lys Pro Ser Val Leu
                20   25   30
Phe Leu His Pro Asp Leu Gly Val Gly Gly Ala Glu Arg Leu Val Leu
            35   40   45
Asp Ala Ala Leu Ala Leu Gln Ala Arg Gly Cys Ser Val Lys Ile Trp
        50   55   60
Thr Ala His Tyr Asp Pro Gly His Cys Phe Ala Glu Ser Arg Glu Leu
65   70   75   80
Pro Val Arg Cys Ala Gly Asp Trp Leu Pro Arg Gly Leu Gly Trp Gly
                85   90   95
Gly Arg Gly Ala Ala Val Cys Ala Tyr Val Arg Met Val Phe Leu Ala
            100   105   110
Leu Tyr Val Leu Phe Leu Ala Asp Glu Glu Phe Asp Val Val Val Cys
            115   120   125
Asp Gln Val Ser Ala Cys Ile Pro Val Phe Arg Leu Ala Arg Arg Arg
        130   135   140
Lys Lys Ile Leu Phe Tyr Cys His Phe Pro Asp Leu Leu Leu Thr Lys

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145                    150                  ·155                    160
Arg Asp Ser Phe Leu Lys Arg Leu Tyr Arg Ala Pro Ile Asp Trp Ile
                 165                 170                 175
Glu Glu Tyr Thr Thr Gly Met Ala Asp Cys Ile Leu Val Asn Ser Gln
                 180                 185                 190
Phe Thr Ala Ala Val Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile
             195                 200                 205
Asp Pro Asp Val Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser
         210                 215                 220
Val Val Pro Glu Xaa Ser Trp Met Thr
225                 230
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<210> 6065
<211> 2084
<212> DNA
<213> Homo sapiens

<400> 6065
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120
gatgaccttg acttttcat aggagatgaa gccatcgata aacctacata tgctacaaag
180
tggccgattc gacatggaat cattgaagac tgggatctta tggaaaggtt catggagcaa
240
gtggttttta aatatcttcg agctgaacct gaggaccatt attttttaat ggggtaacta
300
tctccttcct gctgtaatca gtggccacca gaacctcccc ctccaacccc cgaaaacaga
360
gagtatcttg cagaaattat gtttgaatca tttaacgtac caggactcta cattgcagtt
420
caggcagtgc tggccttggc ggcatcttgg acatctcgac aagtgggtga acgtacgtta
480
acgggatag tcattgacag cggagatgga gtcacccatg ttatcccagt ggcagaaggt
540
tatgtaattg gaagctgcat caaacacatc ccgattgcag gtagagatat tacgtatttc
600
attcaacagc tgctaaggga gagggaggtg ggaatccctc ctgagcagtc actggagacc
660
gcaaaagcca ttaaggagaa atactgttac atttgccccg atatagtcaa ggaatttgcc
720
aagtatgatg tggatccccg gaagtggatc aaacagtaca cgggtatcaa tgcgatcaac
780
cagaagaagt ttgttataga cgttggttac gaaagattcc tgggacctga aatattcttt
840
cacccggagt ttgccaaccc agactttatg gagtccatct cagatgttgt tgatgaagta
900
atacagaact gccccatcga tgtgcggcgc ccgctgtata agaatgtcgt actctcagga
960
ggctccacca tgttcaggga tttcggacgc cgactgcaga gggatttgaa gagagtggtg
1020
gatgctaggc tgaggctcag cgaggagctc agcggcggga ggatcaagcc gaagcctgtg
1080
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gaggtccagg tggtcacgca tcacatgcag cgctacgccg tgtggttcgg aggctccatg
1140
ctggcctcga ctcccgagtt ctttcaggtc tgccacacca agaaggacta tgaagagtac
1200
gggcccagca tctgccgcca caacccgtc tttggagtca tgtcctagtg tctgcctgaa
1260
cgcgtcgttc gatggtgtca cgttggggaa caagtgtcct tcagaaccca gagaaggccg
1320
ccgttctgta aatagcgacg tcggtgttgc tgcccagcag cgtgcttgca ttgccggtgc
1380
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1500
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1620
aaccctttc ctcccagcct attttgtaa ataaaatgtt taaacttgaa atacaaatcg
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1740
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1800
gttctgatat gtttataggc aaacaaataa aacagcaaac tttttgcca catgtttgct
1860
agaaaatgat tatactttat tggagtgaca tgaagtttga acactaaaca gtaatgtatg
1920
agaattacta cagatacatg tatcttttag ttttttttgt ttgaactttc tggagctgtt
1980
ttatagaaga tgatggtttg ttgtcggtga gtgttggatg aaatacttcc ttgcaccatt
2040
gtaataaaag ctgttagaat atttgtaaat atcaaaaaaa aaaa
2084

<210> 6066
<211> 80
<212> PRT
<213> Homo sapiens

<400> 6066
Gly Ile Ala Ile Arg Glu Ser Ala Lys Val Val Asp Gln Ala Gln Arg
 1   5   10   15
Arg Val Leu Arg Gly Val Asp Asp Leu Asp Phe Phe Ile Gly Asp Glu
            20   25   30
Ala Ile Asp Lys Pro Thr Tyr Ala Thr Lys Trp Pro Ile Arg His Gly
        35   40   45
Ile Ile Glu Asp Trp Asp Leu Met Glu Arg Phe Met Glu Gln Val Val
    50   55   60
Phe Lys Tyr Leu Arg Ala Glu Pro Glu Asp His Tyr Phe Leu Met Gly
65   70   75   80

<210> 6067
<211> 406

5250

<212> DNA
<213> Homo sapiens

<400> 6067
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tccctgagct gactgcaccc ctcttcctgg gtagcggtgg cctccccaca gcactgtgtg
120
aatatgctgg gcatggggcg gctcgggcca ctgctccctg gccaaacgga agccctggag
180
ggcatggcca gtgcctggga catgcagggg gctcactgga acgactagcg gtcctcatcc
240
tcctagaact tacattccca gagagaaaga gactcctggg aattataaga gtggagaaag
300
gactataata atcgcaacag ctaacactct tccagctaac actgcatgct gggcactgtc
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ccgagtacat gaccaccctc acaatactcc tgcagagcgc acgcgt
406

<210> 6068
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6068
Met Tyr Ser Gly Gln Cys Pro Ala Cys Ser Val Ser Trp Lys Ser Val
1   5   10   15
Ser Cys Cys Asp Tyr Tyr Ser Pro Phe Ser Thr Leu Ile Ile Pro Arg
                20   25   30
Ser Leu Phe Leu Ser Gly Asn Val Ser Ser Arg Arg Met Arg Thr Ala
            35   40   45
Ser Arg Ser Ser Glu Pro Pro Ala Cys Pro Arg His Trp Pro Cys Pro
        50   55   60
Pro Gly Leu Pro Phe Gly Gln Gly Ala Val Ala Arg Ala Ala Pro Cys
65   70   75   80
Pro Ala Tyr Ser His Ser Ala Val Gly Arg Pro Pro Leu Pro Arg Lys
                    85   90   95
Arg Gly Ala Val Ser Ser Gly Arg Leu His Arg Arg Gly Thr Gly Ala
                100   105   110
Met Trp Trp Glu Gly
        115

<210> 6069
<211> 456
<212> DNA
<213> Homo sapiens

<400> 6069
ngggaaggcc taaaaaatgt catttttacc aactgtgtaa aggatgaaaa tgtcaagcag
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atcatcccga tggtcactga actgattggg agaagccacc gctaccaccg aaaagagaac
120
ctggagtact gtatcatggt cattggggtc cccaacgtgg gcaagtcctc cctcatcaac
180

tccctccgga ggcagcacct caggaaaggg aaagccacca gggtgggtgg cgagcctggg
240
atcaccagag ctgtgatgtc caaaattcag gtggagtcct caggggccag gcccagcact
300
ctgtcaagag ctctgcaggc gtctggcacc tgccgacctc tgtgtggctt ccggctgctg
360
accacgcttc cctcccctcc actcagtgtc cccgctgagc accccggggg caggcactgc
420
cctgccctta ttccacagtc gtcatagtct ttgcgc
456

<210> 6070
<211> 148
<212> PRT
<213> Homo sapiens

<400> 6070
Xaa Glu Gly Leu Lys Asn Val Ile Phe Thr Asn Cys Val Lys Asp Glu
1   5   10   15
Asn Val Lys Gln Ile Ile Pro Met Val Thr Glu Leu Ile Gly Arg Ser
            20   25   30
His Arg Tyr His Arg Lys Glu Asn Leu Glu Tyr Cys Ile Met Val Ile
        35   40   45
Gly Val Pro Asn Val Gly Lys Ser Ser Leu Ile Asn Ser Leu Arg Arg
    50   55   60
Gln His Leu Arg Lys Gly Lys Ala Thr Arg Val Gly Gly Glu Pro Gly
65   70   75   80
Ile Thr Arg Ala Val Met Ser Lys Ile Gln Val Glu Ser Ser Gly Ala
                85   90   95
Arg Pro Ser Thr Leu Ser Arg Ala Leu Gln Ala Ser Gly Thr Cys Arg
            100   105   110
Pro Leu Cys Gly Phe Arg Leu Leu Thr Thr Leu Pro Ser Pro Pro Leu
        115   120   125
Ser Val Pro Ala Glu His Pro Arg Gly Arg His Cys Pro Ala Leu Ile
    130   135   140
Pro Gln Ser Ser
145

<210> 6071
<211> 2633
<212> DNA
<213> Homo sapiens

<400> 6071
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tgagaattct ccactttacc aatacttaca ggatctggga cacacagact ttgaaatatg
120
ttcttctttg tcaccaaaaa cagaaaaatg cacaacagag ggacaacaaa agcctcctac
180
aagagtccta ccaaaatacc tgggatatag taatcactca atgaatataa actgcactta
240
ctggcatgct caaggaatgg gctattaagc aaggtatcct gttaaaagtg gctgaaacca
300

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tcaaaagttg gatttttttt tctcagtgca ataagaaaga tgacttactt cacaagttgg
360
atattggatt ccgactcgac tcattacata ccatcctgca acaggaagtc ctgttacaag
420
aggatgtgga gctgattgag ctacttgatc ccagtatcct gtctgcaggg caatctcaac
480
aacaggaaaa tggacacctt ccaacacttt gctccctggc aacccctaat atttgggatc
540
tctcaatgct atttgccttc attagcttgc tcgttatgct tcccacttgg tggattgtgt
600
cttcctggct ggtatgggga gtgattctat ttgtgtatct ggtcataaga gctttgagat
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tatggaggac agccaaacta caagtgaccc taaaaaaata cagcgttcat ttggaagata
720
tggccacaaa cagccgagct tttactaacc tcgtgagaaa agctttacgt ctcattcaag
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1020
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1080
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1140
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1200
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1320
agtcagtacc gcagtgttta tccaaaactc aacagaagtc aagagaactg aataatgttc
1380
acacagcagt gcgtagcttg cagctccatc tgaaagcatt actgaatgag gtaataattc
1440
ttgaagatga acttgaaaag cttgtttgta ctaaagaaac acaagaacta gtgtcagagg
1500
cttatcccat cctagaacag aaaattaaagt tgattcagcc ccacgttcaa gcaagcaaca
1560
attgctggga agaggccatt tctcaggtcg acaaactgct acgaagaaat acagataaaa
1620
aaggcaagcc tgaaatagca tgtgaaaacc cacattgtac agtagtacct ttgaagcagc
1680
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1740
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1800
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1860
aatctgtgct gggatttaaa gcttcagagg cagaaaggca gaagtggaag caacttctat
1920
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ttagtgatca tggtaagcac tgactttaaa gtaacaggtt atttcaatgt aggggattct
1980
ttctttcttg aaccatgaat gttattttag ctgaagaatt cttggggttt tataagggtc
2040
caccagtatg catagtactt tttcttctag atgctaaatc aatttgatta ataaaagagt
2100
aggaatgtaa tcacattgga aatatgaagt catacttttt tatgagttat ttaattttt
2160
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2220
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2280
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2340
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2400
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2460
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2520
ggagaatcac ttgaacccgg gaggcggagg tttcagtgag ccaagatcac gccactgcac
2580
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2633
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<210> 6072
<211> 76
<212> PRT
<213> Homo sapiens
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<400> 6072
Met Ala Gln Ala Arg Arg His Met Leu Val Ile Ser Ala Arg Trp Glu
1               5                   10                  15
Ala Glu Ala Gly Gly Ser Phe Glu Val Arg Ser Ser Arg Pro Ala Trp
            20                  25                  30
Pro Thr Trp Arg Asn Pro Ile Ser Thr Lys Asn Thr Lys Ile Asn Lys
        35                  40                  45
Ala Trp Trp Arg Val Pro Val Val Pro Ala Thr Arg Glu Ala Glu Ala
    50                  55                  60
Gly Glu Ser Leu Glu Pro Gly Arg Arg Arg Phe Gln
65                  70                  75
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<210> 6073
<211> 387
<212> DNA
<213> Homo sapiens
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<400> 6073
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tgaccccagc cagccttggc tctcgggttg ggaaatacag tcacggtatc catggagacc
120
tcttgaggtg gagacgggcg ttaaacccctt ctcaggcagt ctgaggtggc cagagtctga
180
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agcaagcagc ctctatggag cgaggggagc aggtgggccc agcctgagcg gggcctctgc
240
acagccagct ttcccccaca cctgtctcca gccagggcac ccacaggccc tttctctccc
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aggatgaagc ctgctgggag cgtgaatgac atggccctgg atgccttcga cttggaccgg
360
atgaagcagg agatcctaga ggaggtg
387


<210> 6074
<211> 69
<212> PRT
<213> Homo sapiens

<400> 6074
Ser Lys Gln Pro Leu Trp Ser Glu Gly Ser Arg Trp Ala Gln Pro Glu
1               5                   10                  15
Arg Gly Leu Cys Thr Ala Ser Phe Pro Pro His Leu Ser Pro Ala Arg
                20                  25                  30
Ala Pro Thr Gly Pro Phe Ser Pro Arg Met Lys Pro Ala Gly Ser Val
            35                  40                  45
Asn Asp Met Ala Leu Asp Ala Phe Asp Leu Asp Arg Met Lys Gln Glu
        50                  55                  60
Ile Leu Glu Glu Val
65


<210> 6075
<211> 4668
<212> DNA
<213> Homo sapiens

<400> 6075
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gacggcaaga tgagtgagcc ataaacttct atccaattaa agtcactgtc tttttgaagt
120
ctcattacag catctggctg tactctaaca tatacaaata tgtttctggt tcaacatctc
180
ctgtgcacgg agaaagcaca ggcatgtttc tcacaagtca caaactacta agttaaaatc
240
cttaacttct gggaatgttt tttaaaagga ggtgaaaatt ggttacaact ttactttttct
300
taccttgtta agatactcat aagcctctac atcatttcca ctgtgatagt ttcggatccc
360
ttgaagtaag tagagtctta gaaacagtac cttctctttc ccacaatttc cttttatgtg
420
gaccagtctc tgatgatttt ctccgtaaca atttttaaag catttctggg ccaagtttaa
480
ttttttttct gcatcatcaa ggcattccag ctgttccagg cggaagtaac accacactat
540
atccagctgg aggacggcat agttatccac tgtgtccagc agctctctgc aacactcaca
600
gaaatatttg tcagcgtcca acagacatgg caaggctatt ccatattctt ttcttttcag
660
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gaaagctctg cccttctcat gatatcccat agctaacata agggcttttc tttctgatgg
720
gggaattctg attgatctgc ctgtctggtt agctatgtct aagtacggtg tcatttctgg
780
atccaccact gtctctgctg ctctctttgc cagtatttct agtcctctct tggtcctctg
840
aatttgtttt tctttgagtt tggcctcatt ttgctcctct tcctctaact ggaagttttt
900
cctcgcgtcc tcttcagatt gttttagttc aagcaccatc gctttcacat tgtgagccac
960
gccttgttct tcaagggttt tccctagttg tagttgcttc ttatttatga caattttgat
1020
ataattttct tgaagtccaa aggtttcagc tattttggac ctcagttctc tgccagtgat
1080
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1140
ctcgattgta gcaattcccg ttgttctata attgtcattt cctgttccac gctcaattgc
1200
cttgcaacgt atttcttcta ttaccttttc tacttcattt tcacagcatt ctagtctgtc
1260
agagtactgc ttagcaaggt cttttttttag tcttggtggt aaaaacacct cgattgtagc
1320
aattcccgtt gttctataat tgtcatttcc tgttccacgc tcaattgcct tgcaacgtat
1380
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1440
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1500
aagttgaatc ctgtcttccc ttaaaaactg ggtcaatttt gcttgaagat atttctttg
1560
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1620
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1680
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1740
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1800
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1860
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1920
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1980
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2040
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2100
aaaaacttcc agttagagga agaggagcaa aatgaggcca aactcaaaga aaaacaaatt
2160
cagaggacca agagaggact agaaatactg gcaaagagag cagcagagac agtggtggat
2220
ccagaaatga caccgtactt agacatagct aaccagacag gcagatcaat cagaattccc
2280
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ccatcagaaa gaaaagccct tatgttagct atgggatatc atgagaaggg cagagctttc
2340
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2400
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2460
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2520
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2580
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2700
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2880
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3120
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3660
cttggtgttt taccccgaaa caggaaggaa caggggtcct gtagaacagg ggtcctgggg
3720
aaggtgtcca gggcagggtc ctgggaaggg tgtcccgact gcttcctctc cagctgtggc
3780
tccatctgcc cagcttgcct gcctcctgca cccactgccc tgaccttcct gcttcccacg
3840
ctgccatctc tgccagggtg ccacatgggt tcctgtgcca ccctttcccc gcccctcaaa
3900
```

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tcgtccttta agtcttcctt ccaagtgctg tggggcataa cgatgaggcg ctggccttgg
3960
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4020
ttcagtaaaa tacgcccccg aaattcaaga ttgagtgtca ggctttatat atattcagca
4080
ttcctcatta cagaaatctt ctattgaatg ggaaaggttt aaatgctaac caaagcaatt
4140
tattttttaat taatattttt agactctgtg ctgtcatact gaactcactg ctagctaaga
4200
gacctatcag agatttagat atattttctc caggtttttt gtgggttttc tttgttgttg
4260
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4320
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4380
gagttccttc cagccccagg accgcagcag cagccaggtg ccgagtggat tgagtgccag
4440
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4560
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4668


<210> 6076
<211> 601
<212> PRT
<213> Homo sapiens


<400> 6076
Met Ala Gln Lys Lys Tyr Leu Gln Ala Lys Leu Thr Gln Phe Leu Arg
1               5                   10                  15
Glu Asp Arg Ile Gln Leu Trp Lys Pro Pro Tyr Thr Glu Glu Asn Lys
                20                  25                  30
Glu Val Gly Leu Ala Leu Lys Asp Leu Ala Lys Gln Tyr Ser Asp Arg
            35                  40                  45
Leu Glu Cys Cys Glu Asn Glu Val Glu Lys Val Ile Glu Glu Ile Arg
        50                  55                  60
Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn Asp Asn Tyr Arg Thr Thr
65                  70                  75                  80
Gly Ile Ala Thr Ile Glu Val Phe Leu Pro Pro Arg Leu Lys Lys Asp
                85                  90                  95
Arg Lys Asn Leu Leu Glu Thr Arg Leu His Ile Thr Gly Arg Glu Leu
                100                 105                 110
Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu Gln Glu Asn Tyr Ile Lys
            115                 120                 125
Ile Val Ile Asn Lys Lys Gln Leu Gln Leu Gly Lys Thr Leu Glu Glu
        130                 135                 140
Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu Leu Lys Gln
145                 150                 155                 160
Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu Glu Glu Gln
```

```
                      165                     170                     175
Asn Glu Ala Lys Leu Lys Glu Lys Gln Ile Gln Arg Thr Lys Arg Gly
            180                     185                     190
Leu Glu Ile Leu Ala Lys Arg Ala Ala Glu Thr Val Val Asp Pro Glu
            195                     200                     205
Met Thr Pro Tyr Leu Asp Ile Ala Asn Gln Thr Gly Arg Ser Ile Arg
            210                     215                     220
Ile Pro Pro Ser Glu Arg Lys Ala Leu Met Leu Ala Met Gly Tyr His
225                     230                     235                     240
Glu Lys Gly Arg Ala Phe Leu Lys Arg Lys Glu Tyr Gly Ile Ala Leu
                245                     250                     255
Pro Cys Leu Leu Asp Ala Asp Lys Tyr Phe Cys Glu Cys Cys Arg Glu
                260                     265                     270
Leu Leu Asp Thr Val Asp Asn Tyr Ala Val Leu Gln Leu Asp Ile Val
            275                     280                     285
Trp Cys Tyr Phe Arg Leu Glu Gln Leu Glu Cys Leu Asp Asp Ala Glu
        290                     295                     300
Lys Lys Leu Asn Leu Ala Gln Lys Cys Phe Lys Asn Cys Tyr Gly Glu
305                     310                     315                     320
Asn His Gln Arg Leu Val His Ile Lys Gly Asn Cys Gly Lys Glu Lys
            325                     330                     335
Val Leu Phe Leu Arg Leu Tyr Leu Leu Gln Gly Ile Arg Asn Tyr His
            340                     345                     350
Ser Gly Asn Asp Val Glu Ala Tyr Glu Tyr Leu Asn Arg His Val Ser
        355                     360                     365
Ser Leu Lys Ser Tyr Ile Leu Ile His Gln Lys Trp Thr Ile Cys Cys
        370                     375                     380
Ser Trp Gly Leu Leu Pro Arg Lys Xaa Arg Leu Gly Leu Arg Ala Cys
385                     390                     395                     400
Asp Gly Asn Val Asp His Ala Ala Thr His Ile Thr Asn Arg Arg Glu
                405                     410                     415
Glu Leu Ala Gln Ile Arg Lys Glu Glu Lys Glu Lys Lys Arg Arg Arg
            420                     425                     430
Leu Glu Asn Ile Arg Phe Leu Lys Gly Met Gly Tyr Ser Thr His Ala
            435                     440                     445
Ala Gln Gln Ile Leu Leu Ser Asn Pro Gln Met Trp Trp Leu Asn Asp
        450                     455                     460
Ser Asn Pro Glu Thr Asp Asn Arg Gln Glu Ser Pro Ser Gln Glu Asn
465                     470                     475                     480
Ile Asp Arg Leu Val Tyr Met Gly Phe Asp Ala Leu Val Ala Glu Ala
            485                     490                     495
Ala Leu Arg Val Phe Arg Gly Asn Val Gln Leu Ala Ala Gln Thr Leu
            500                     505                     510
Ala His Asn Gly Gly Ser Leu Pro Pro Glu Leu Pro Leu Ser Pro Glu
        515                     520                     525
Asp Ser Leu Ser Pro Pro Ala Thr Ser Pro Ser Asp Ser Ala Gly Thr
        530                     535                     540
Ser Ser Ala Ser Thr Asp Glu Asp Met Glu Thr Glu Ala Val Asn Glu
545                     550                     555                     560
Ile Leu Glu Asp Ile Pro Glu His Glu Glu Asp Tyr Leu Asp Ser Thr
                565                     570                     575
Leu Glu Asp Glu Glu Ile Ile Ile Ala Glu Tyr Leu Ser Tyr Val Glu
            580                     585                     590
Asn Arg Lys Ser Ala Thr Lys Lys Asn
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                    595   600

<210> 6077
<211> 2093
<212> DNA
<213> Homo sapiens

<400> 6077
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tctggcggat cggggaatcg gatcaaggcg agaggatccg gcagggaagg agcttcgggg
120
ccgggggttg ggccgcacat ttacgtgcgc gaagcggagg accgggagct ggtgacgatg
180
gcggggccgc agcccctggc gctgcaactg gaacagttgt tgaacccgcg accaagcgag
240
gcggaccctg aagcggaccc cgaggaagcc actgctgcca gggtgattga caggtttgat
300
gaaggggaag atggggaagg tgatttccta gtagtgggta gcattagaaa actggcatca
360
gcctccctct tggacacgga caaaaggtat tgcggcaaaa ccacctctag aaaagcatgg
420
aatgaagacc attgggagca gactctgcca ggatcgtctg atgaggaaat atctgatgag
480
gaagggtctg gagatgaaga ttcagaggga ctgggtctgg aggaatatga tgaggacgac
540
ctgggtgctg ctgaggaaca ggagtgtggt gatcagggag agcaagaaga cgagaagcca
600
ctctgcaaaa acaccgggct tcagtgtcca gagtatcagt gactttgaga aatttaccaa
660
gggaatggat gacctgggag cagtgaggag gaggaagacg aagagagtgg catggaagaa
720
ggggatgacg cggaagactc ccaaggcgag agtgaggaag acagggctgg agatagaaac
780
agtgaggatg atggtgtggt gatgaccttc tctagtgtca aagtttctga ggaagtggag
840
aaaggaagag ccgtgaagaa ccagatagca ctgtgggacc agctcttgga aggaaggatc
900
aaactacaaa aagctctgtt gaccaccaac cagcttcctc aaccagatgt tttcccattg
960
ttcaaggaca aaggtggccc agaattttcc agtgccctga aaaatagtca caaggcactt
1020
aaagcattgt tgaggtcatt ggtaggtctt caggaagagt tgcttttcca gtacccagac
1080
actagatatc tagtagatgg acaaagccc aatgcgggaa gtgaggagat ttctagtgaa
1140
gatgatgagc tggtagaaga gaagaagcag caacgaagaa gggtccctgc aaagaggaag
1200
ctggagatgg aggactatcc cagcttcatg gcaaagcgct ttgccgactt tacagtctac
1260
aggaaccgca cacttcagaa atggcacgat aagaccaaac tggcttctgg aaaactgggg
1320
aagggttttg gtgcctttga acgctcaatc ttgactcaga tcgaccatat tctgatggac
1380

                                5260

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aaagagagat tacttcgaag gacacagacc aagcgctctg tctatcgagt tcttggcaaa
1440
cctgagccag cagctcagcc tgtcccagag agtttgccag gggaaccgga gatccttcct
1500
caagcccctg ctaatgctca tctgaaggac ttggatgaag aaatctttga tgatgatgac
1560
ttttaccacc agctccttcg agaactcata gaacggaaga ccagctcctt ggatcccaac
1620
gatcaggtgg ccatgggaag gcagtggctt gcaatccaga agttacgaag caaaatccac
1680
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1740
ctactgagtt tcatggcacc tattgaccat actacaatga atgatgatgc caggacagaa
1800
ctgtaccgct ctcttttttgg ccagctccac cctcccgacg aaggccacgg ggattgacat
1860
cgcccacctc cgacacccag tgggcgcctt ggctggtgcg gctgctggtc cagatggagg
1920
aaaccagtga ctttatgggg ctgagctagt agggaagccc ctggaaagat gctgcgttcc
1980
gaacctgtgc ctaatacacg caagggcgct gtcccgccca accccgcctt taaacgccac
2040
aaataaagag cattgttacc gccaaaaaaa aaaaaaaaaa aaaaaaaaa aaa
2093
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```
<210> 6078
<211> 213
<212> PRT
<213> Homo sapiens

<400> 6078
Arg Pro Gly Arg Ser Pro Gly Ser Gly Arg Ser Arg Ala Val Gly Cys
1               5                   10                  15
Leu Arg Ala Val Ser Gly Gly Ser Gly Asn Arg Ile Lys Ala Arg Gly
            20                  25                  30
Ser Gly Arg Glu Gly Ala Ser Gly Pro Gly Val Gly Pro His Ile Tyr
            35                  40                  45
Val Arg Glu Ala Glu Asp Arg Glu Leu Val Thr Met Ala Gly Pro Gln
        50                  55                  60
Pro Leu Ala Leu Gln Leu Glu Gln Leu Leu Asn Pro Arg Pro Ser Glu
65                  70                  75                  80
Ala Asp Pro Glu Ala Asp Pro Glu Glu Ala Thr Ala Ala Arg Val Ile
            85                  90                  95
Asp Arg Phe Asp Glu Gly Glu Asp Gly Glu Gly Asp Phe Leu Val Val
            100                 105                 110
Gly Ser Ile Arg Lys Leu Ala Ser Ala Ser Leu Leu Asp Thr Asp Lys
            115                 120                 125
Arg Tyr Cys Gly Lys Thr Thr Ser Arg Lys Ala Trp Asn Glu Asp His
        130                 135                 140
Trp Glu Gln Thr Leu Pro Gly Ser Ser Asp Glu Glu Ile Ser Asp Glu
145                 150                 155                 160
Glu Gly Ser Gly Asp Glu Asp Ser Glu Gly Leu Gly Leu Glu Glu Tyr
            165                 170                 175
Asp Glu Asp Asp Leu Gly Ala Ala Glu Glu Gln Glu Cys Gly Asp Gln
```

```
                  180              185                190
Gly Glu Gln Glu Asp Glu Lys Pro Leu Cys Lys Asn Thr Gly Leu Gln
        195              200                205
Cys Pro Glu Tyr Gln
    210


<210> 6079
<211> 651
<212> DNA
<213> Homo sapiens


<400> 6079
ggccagtcct ccgcctcgct ccgtcagttt ccccctgctg aactactggg tgcggagcgg
60
gtgcgtgcgc agcctgcgca tgtgcatagg ggtcgactgc cgctgcggtg catgaggcgg
120
catgcgcagc ggggccgtgg gtgtacgcgg cgcagcgcgg cagtcctgat ggcccggcat
180
gggttaccgc tgctgcccct gctgtcgctc ctggtcggcg cgtggctcaa gctaggaaat
240
ggacaggcta ctagcatggt ccaactgcag ggtgggagat tcctgatggg aacaaattct
300
ccagacagca gagatggtga agggcctgtg cgggaggcga cagtgaaacc ctttgccatc
360
gacatatttc ctgtcaccaa caaagatttc agggattttg tcaggagaa aaagtatcgg
420
acagaagctg agatgtttgg atggagcttt gtctttgagg actttgtctc tgatgagctg
480
agaaacaaag ccacccagcc aatgaagtct gtactctggt ggcttccagt ggaaaaggca
540
ttttggaggc agcctgcagg tcctggctct ggcatccgag agagactgga gcacccagtg
600
ttacacgtga gctggaatga cgcccgtgcc tactgtgctt ggcggggaaa a
651


<210> 6080
<211> 162
<212> PRT
<213> Homo sapiens


<400> 6080
Leu Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu
 1               5                10                15
Val Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val
            20               25                30
Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
        35               40                45
Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
    50               55                60
Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
65               70                75                80
Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
            85                90                95
Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro
```

```
              100                 105                 110
Met Lys Ser Val Leu Trp Trp Leu Pro Val Glu Lys Ala Phe Trp Arg
         115                 120                 125
Gln Pro Ala Gly Pro Gly Ser Gly Ile Arg Glu Arg Leu Glu His Pro
     130                 135                 140
Val Leu His Val Ser Trp Asn Asp Ala Arg Ala Tyr Cys Ala Trp Arg
145                 150                 155                 160
Gly Lys
```

```
<210> 6081
<211> 655
<212> DNA
<213> Homo sapiens

<400> 6081
gataatgatc aggaacctcc ctattcaatg ataacattac acgaaatggc agaaacagat
60
gaaggatggt tggatgttgt ccagtcttta attagagtta ttccactgga agatccactg
120
ggaccagctg ttataacatt gttactagat gaatgtccat tgcccactaa agatgcactc
180
cagaaattga ctgaaattct caatttaaat ggagaagtag cttgccagga ctcaagccat
240
cctgccaaac acaggaacac atctgcagtc ctaggctgct ggccgagaa actagcaggt
300
cctgcaagta taggtttact tagcccagga atactggaat acttgctaca gtgtctgaag
360
ttacagtccc accccacagt catgcttttt gcacttatcg cactggaaaa gtttgcacag
420
acaagtgaaa ataaattgac tatttctgaa tccagtatta gtgaccggct tgtcacattg
480
gagtcctggg ctaatgatcc tgattatctg aaacgtcaag ttggtttctg tgcccagtgg
540
agcttagaca atctcttttt aaaagaaggt agacagctga cctatgagaa agtgaacttg
600
agtagcatta gggccatgct gaatagcaat gatgtcagcg agtacctgaa gatct
655
```

```
<210> 6082
<211> 218
<212> PRT
<213> Homo sapiens

<400> 6082
Asp Asn Asp Gln Glu Pro Pro Tyr Ser Met Ile Thr Leu His Glu Met
1               5                 10                  15
Ala Glu Thr Asp Glu Gly Trp Leu Asp Val Val Gln Ser Leu Ile Arg
           20                 25                  30
Val Ile Pro Leu Glu Asp Pro Leu Gly Pro Ala Val Ile Thr Leu Leu
         35                 40                  45
Leu Asp Glu Cys Pro Leu Pro Thr Lys Asp Ala Leu Gln Lys Leu Thr
     50                 55                  60
Glu Ile Leu Asn Leu Asn Gly Glu Val Ala Cys Gln Asp Ser Ser His
```

```
65                        70                        75                        80
Pro Ala Lys His Arg Asn Thr Ser Ala Val Leu Gly Cys Leu Ala Glu
                    85                        90                        95
Lys Leu Ala Gly Pro Ala Ser Ile Gly Leu Leu Ser Pro Gly Ile Leu
                    100                       105                       110
Glu Tyr Leu Leu Gln Cys Leu Lys Leu Gln Ser His Pro Thr Val Met
        115                       120                   ,   125
Leu Phe Ala Leu Ile Ala Leu Glu Lys Phe Ala Gln Thr Ser Glu Asn
        130                       135                       140
Lys Leu Thr Ile Ser Glu Ser Ser Ile Ser Asp Arg Leu Val Thr Leu
145                       150               .       155                       160
Glu Ser Trp Ala Asn Asp Pro Asp Tyr Leu Lys Arg Gln Val Gly Phe
                    165                       170                       175
Cys Ala Gln Trp Ser Leu Asp Asn Leu Phe Leu Lys Glu Gly Arg Gln
                    180                       185                       190
Leu Thr Tyr Glu Lys Val Asn Leu Ser Ser Ile Arg Ala Met Leu Asn
        195                       200                       205
Ser Asn Asp Val Ser Glu Tyr Leu Lys Ile
    210                       215
```

```
<210> 6083
<211> 358
<212> DNA
<213> Homo sapiens

<400> 6083
nnacgcgtga ggggacaggc tgagaaaaaa gaattacgac ataaaataga tgaaatggaa
60
gaaaaagaac aggagctcca ggcaaaaata gaagctttgc aagctgataa tgatttcacc
120
aatgaaaggc taacagcttt acaagagaag ctgatcgtcg aagggcatct aaccaaagcg
180
gtagaagaaa caaagctttc aaaagaaaat cagacaagag caaaagaatc tgatttttca
240
gatactctga gtccaagcaa ggaaaaaagc agtgacgaca ctacagacgc ccaaatggat
300
gagcaagacc taaatgagcc tcttgccaaa gtgtcccttt taaaagatga cttgcagg
358
```

```
<210> 6084
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6084
Met Glu Glu Lys Glu Gln Glu Leu Gln Ala Lys Ile Glu Ala Leu Gln
1                   5                         10                        15
Ala Asp Asn Asp Phe Thr Asn Glu Arg Leu Thr Ala Leu Gln Glu Lys
                    20                        25                        30
Leu Ile Val Glu Gly His Leu Thr Lys Ala Val Glu Glu Thr Lys Leu
        35                    .       40                        45
Ser Lys Glu Asn Gln Thr Arg Ala Lys Glu Ser Asp Phe Ser Asp Thr
    50                        55                        60
Leu Ser Pro Ser Lys Glu Lys Ser Ser Asp Asp Thr Thr Asp Ala Gln
```

```
65                  70                  75                  80
Met Asp Glu Gln Asp Leu Asn Glu Pro Leu Ala Lys Val Ser Leu Leu
                85                  90                  95
Lys Asp Asp Leu Gln
             100


<210> 6085
<211> 2307
<212> DNA
<213> Homo sapiens


<400> 6085
nntccggatc agttcgagtg cctctaccca taccctgttc atcacccatg tgacagacag
60
agccaggtgg actttgacaa tcccgactac gagaggttcc ctaatttcca aaatgtggtt
120
ggttacgaaa cagtggttgg ccctggtgat gttctttaca tcccaatgta ctggtggcat
180
cacatagagt cattactaaa tgggggatt accatcactg tgaacttctg gtataagggg
240
gctcccaccc ctaagagaat tgaatatcct ctcaaagctc atcagaaagt ggccataatg
300
agaaacattg agaagatgct tggagaggcc ttggggaacc cacaagaggt ggggcccttg
360
ttgaacacaa tgatcaaggg ccgatacaac tagcctgcca ggggtcaagg cctcctgcca
420
ggtgactgct atcccgtcca caccgcttca ttgatgagga caggagactc caagcgctag
480
tattgcacgc tgcacttaat ggactggact cttgccatgg cccaggagtc aggtgtttgg
540
agcgaggcag ggcagttggc actccactcc tatttggagg gacttcatac ccttgcctct
600
tgtgcccctg caccttctct ctctgccccc cgcctaaagt cctgcattca gtgtgtggag
660
ccccagcttt tggttgtcat catgtctgtg tgtatgttag tctgtcaact tcggaatgtg
720
tgcgtgtgtg tgcatgcaca cgcatgtatg tatctgttcc ctgttccttc tgggtcaggc
780
tgtcacttcc ggctctcagc cctatctcct gcaacctcag tgcctcagcc tgagagagag
840
atgagatgct cttggactcc ccactgcatc tgggctgcag ggccagagct agtctgacca
900
ttaggtcagt ctgcctcctg acagtttttg cgtagtcaag ctctaggcgg tatgggaatg
960
gctaccggga ctctaatggg gtgaaagaga ggggaggctt gcctttgaga gcctatatag
1020
ccttcctgtg agagaggatt agatagggtt ccaactgggc ctacaagctc aagccataca
1080
taaaaggacc ttgggacata agaaccaatg attgtgcata agttctaaat tagagacaca
1140
tatagtttct ctctttcagc accagctctt gcccctatgc tgggtaccaa gggagttctc
1200
ctagctgtgg cttctctagg ttctaggggt gcaagcctct gtgtgtttgt ttgtgtgtgt
1260
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ctgtgtgtgc gtatcacact aggggtgcaa gcctctgggt gtgtgtgtgt gtgtgcgtgc
1320

gtgtgtgtgt gtgtgtccgt gtgtgtgtgt gtgtgtgtcc acactggcca gcctccctac
1380

ttaccaaggt tctccactgc ttaccttttc cagtgggaca gtacagtgtg agcccccggg
1440

aagtactgcc tgacctatcc taagctttta cacttggatt ttagccatca tatgttggcc
1500

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1980

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2040

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2100

gatgcgtgtg gatgtgtgtg catgcctgag tgcgtttttt ggggaggggt gtttattttt
2160

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2280

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2307

<210> 6086
<211> 84
<212> PRT
<213> Homo sapiens

<400> 6086
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Arg Gly Ala Ser Leu Cys Val Phe Val Cys Val Cys Leu Cys Val Arg
                20   25   30
Ile Thr Leu Gly Val Gln Ala Ser Gly Cys Val Cys Val Cys Ala Cys
            35   40   45
Val Cys Val Cys Val Ser Val Cys Val Cys Val Cys Val His Thr Gly
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Gln Pro Pro Tyr Leu Pro Arg Phe Ser Thr Ala Tyr Leu Phe Gln Trp
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Asp Ser Thr Val

5266

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<211> 1506
<212> DNA
<213> Homo sapiens

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360
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1380

5267

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<210> 6088
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<212> PRT
<213> Homo sapiens

<400> 6088
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Pro Gly Asp Leu Leu Ser Ala Arg Leu Leu Ser Gln Glu Lys Arg Ala
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Ala Glu Thr His Phe Gly Phe Glu Thr Val Ser Glu Glu Lys Gly
    50                  55                  60
Gly Lys Val Tyr Gln Val Phe Glu Ser Val Ala Lys Lys Tyr Asp Val
65                  70                  75                  80
Met Asn Asp Met Met Ser Leu Gly Ile His Arg Val Trp Lys Asp Leu
                85                  90                  95
Leu Leu Trp Lys Met His Pro Leu Pro Gly Thr Gln Leu Leu Asp Met
            100                 105                 110
Ala Gly Gly Thr Gly Asp Ile Ala Phe Arg Phe Leu Asn Tyr Val Gln
        115                 120                 125
Ser Gln His Gln Arg Lys Gln Lys Arg Gln Leu Arg Ala Gln Gln Asn
    130                 135                 140
Leu Ser Trp Glu Glu Ile Ala Lys Glu Tyr Gln Asn Glu Glu Asp Ser
145                 150                 155                 160
Leu Gly Gly Ser Arg Val Val Val Cys Asp Ile Asn Lys Glu Met Leu
                165                 170                 175
Lys Val Gly Lys Gln Lys Ala Leu Ala Gln Gly Tyr Arg Ala Gly Leu
            180                 185                 190
Ala Trp Val Leu Gly Asp Ala Glu Glu Leu Pro Phe Asp Asp Asp Lys
        195                 200                 205
Phe Asp Ile Tyr Thr Ile Ala Phe Gly Ile Arg Asn Val Thr His Ile
    210                 215                 220
Asp Gln Ala Leu Gln Glu Ala His Arg Val Leu Lys Pro Gly Gly Arg
225                 230                 235                 240
Phe Leu Cys Leu Glu Phe Ser Gln Val Asn Asn Pro Leu Ile Ser Arg
                245                 250                 255
Leu Tyr Asp Leu Tyr Ser Phe Gln Val Ile Pro Val Leu Gly Glu Val
                260                 265                 270
Ile Ala Gly Asp Trp Lys Ser Tyr Gln Tyr Leu Val Glu Ser Ile Arg
            275                 280                 285
Arg Phe Pro Ser Gln Glu Glu Phe Lys Asp Met Ile Glu Asp Ala Gly
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325

<210> 6089
<211> 4211
<212> DNA
<213> Homo sapiens

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1380

5269

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5270

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<210> 6090
<211> 839
<212> PRT
<213> Homo sapiens

<400> 6090
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Glu Asp Cys Thr Trp Met Gln Glu Tyr Asn Pro Pro Thr Phe Glu Thr

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Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp Leu Arg
65                    70                    75                    80
Pro Glu Leu His Thr Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu
                85                    90                    95
Gln Phe Leu Thr Ile Leu Pro Glu Glu Phe Gln Pro Trp Val Arg Glu
                100                   105                   110
His His Pro Glu Ser Gly Glu Glu Ala Val Ala Val Ile Glu Asn Ile
                115                   120                   125
Gln Arg Glu Leu Glu Glu Arg Arg Gln Gln Ile Val Ala Cys Pro Asp
        130                   135                   140
Val Leu Pro Arg Lys Met Ala Thr Pro Gly Ala Val Gln Glu Ser Cys
145                   150                   155                   160
Ser Pro His Pro Leu Thr Val Asp Thr Gln Pro Glu Gln Ala Pro Gln
                165                   170                   175
Lys Pro Arg Leu Leu Glu Glu Asn Ala Leu Pro Val Leu Gln Val Pro
                180                   185                   190
Ser Leu Pro Leu Lys Asp Ser Gln Glu Leu Thr Ala Ser Leu Leu Ser
        195                   200                   205
Thr Gly Ser Gln Lys Leu Val Lys Ile Glu Glu Val Ala Asp Val Ala
        210                   215                   220
Val Ser Phe Ile Leu Glu Glu Trp Gly His Leu Asp Gln Ser Gln Lys
225                   230                   235                   240
Ser Leu Tyr Arg Asp Asp Arg Lys Glu Asn Tyr Gly Ser Ile Thr Ser
                245                   250                   255
Met Gly Tyr Glu Ser Arg Asp Asn Met Glu Leu Ile Val Lys Gln Ile
                260                   265                   270
Ser Asp Asp Ser Glu Ser His Trp Val Ala Pro Glu His Thr Glu Arg
        275                   280                   285
Ser Val Pro Gln Asp Pro Asp Phe Ala Glu Val Ser Asp Leu Lys Gly
        290                   295                   300
Met Val Gln Arg Trp Gln Val Asn Pro Thr Val Gly Lys Ser Arg Gln
305                   310                   315                   320
Asn Pro Ser Gln Lys Arg Asp Leu Asp Ala Ile Thr Asp Ile Ser Pro
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Lys Gln Ser Thr His Gly Glu Arg Gly His Arg Cys Ser Asp Cys Gly
                340                   345                   350
Lys Phe Phe Leu Gln Ala Ser Asn Phe Ile Gln His Arg Arg Ile His
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Thr Gly Glu Lys Pro Phe Lys Cys Gly Glu Cys Gly Lys Ser Tyr Asn
        370                   375                   380
Gln Arg Val His Leu Thr Gln His Gln Arg Val His Thr Gly Glu Lys
385                   390                   395                   400
Pro Tyr Lys Cys Gln Val Cys Gly Lys Ala Phe Arg Val Ser Ser His
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Leu Val Gln His His Ser Val His Ser Gly Glu Arg Pro Tyr Gly Cys
                420                   425                   430
Asn Glu Cys Gly Lys Asn Phe Gly Arg His Ser His Leu Ile Glu His
                435                   440                   445
Leu Lys Arg His Phe Arg Glu Lys Ser Gln Arg Cys Ser Asp Lys Arg
        450                   455                   460
Ser Lys Asn Thr Lys Leu Ser Val Lys Lys Lys Ile Ser Glu Tyr Ser
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      Lys Gln Gly Ile Pro Met Lys Glu Ile Leu Gly Gln Pro Ser Ser Lys
                   515                    520                    525
      Arg Met Asn Tyr Ser Glu Val Pro Tyr Val His Lys Lys Ser Ser Thr
               530                    535                    540
      Gly Glu Arg Pro His Lys Cys Asn Glu Cys Gly Lys Ser Phe Ile Gln
      545                    550                    555                    560
      Ser Ala His Leu Ile Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
                       565                    570                    575
      Phe Arg Cys Glu Glu Cys Gly Lys Ser Tyr Asn Gln Arg Val His Leu
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      Thr Gln His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Thr Cys Pro
               595                    600                    605
      Leu Cys Gly Lys Ala Phe Arg Val Arg Ser His Leu Val Gln His Gln
           610                    615                    620
      Ser Val His Ser Gly Glu Arg Pro Phe Lys Cys Asn Glu Cys Gly Lys
      625                    630                    635                    640
      Gly Phe Gly Arg Arg Ser His Leu Ala Gly His Leu Arg Leu His Ser
                       645                    650                    655
      Arg Glu Lys Ser His Gln Cys Arg Glu Cys Gly Glu Ile Phe Phe Gln
                   660                    665                    670
      Tyr Val Ser Leu Ile Glu His Gln Val Leu His Met Gly Gln Lys Asn
                   675                    680                    685
      Glu Lys Asn Gly Ile Cys Glu Glu Ala Tyr Ser Trp Asn Leu Thr Val
               690                    695                    700
      Ile Glu Asp Lys Lys Ile Glu Leu Gln Glu Gln Pro Tyr Gln Cys Asp
      705                    710                    715                    720
      Ile Cys Gly Lys Ala Phe Gly Tyr Ser Ser Asp Leu Ile Gln His Tyr
                   725                    730                    735
      Arg Thr His Thr Ala Glu Lys Pro Tyr Gln Cys Asp Ile Cys Arg Glu
               740                    745                    750
      Asn Val Gly Gln Cys Ser His Thr Lys Gln His Gln Lys Ile Tyr Ser
               755                    760                    765
      Ser Thr Lys Ser His Gln Cys His Glu Cys Gly Arg Gly Phe Thr Leu
           770                    775                    780
      Lys Ser His Leu Asn Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
      785                    790                    795                    800
      Phe Gln Cys Lys Glu Cys Gly Met Asn Phe Ser Trp Ser Cys Ser Leu
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<210> 6091
<211> 1336
<212> DNA
<213> Homo sapiens

<400> 6091

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<210> 6092
<211> 118
<212> PRT
<213> Homo sapiens
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<400> 6092
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Thr Pro Asn Trp Tyr Trp Val Leu Gly His Pro Asn Leu Ile Arg Asp
        35                    40                   45
Val Thr Arg Gln Val Pro Ser Pro Pro Ser Gly Phe Arg Leu Pro Ser
    50                    55                   60
Ser Arg His Glu Gly Pro Ser Pro Pro Arg Asp Leu Gly Thr Ser Gly
65                    70                    75                   80
Pro Ser Arg Ala Ala Ser His Lys Pro Ser Asn Glu Gln Arg Asp Ala
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<210> 6093
<211> 1998
<212> DNA
<213> Homo sapiens

<400> 6093
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gcagtaggtg gcttggctaa agccccagcc agccatggct gctggtgggg gaaggctgtt
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660
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720
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780
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840
tgcacatgca gaaatctggg caggtcctat cggaagctgc tctcacccca gaggccccag
900
ggagagtggc tggacctcgg gagccagggc ctctgcacct acaggctctg ccctcagtcc
960
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1020
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1080
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1140
cggattccaa cataccccta tcagcatttg aagaaatgac tgggatactg gacctgtttc
1200
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1260
tggggattct cttctgaagg ctgacatgat cattacaagt aagttttct aatgtggaca
1320
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1380
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1440
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gcctctcatc tccctcaaga ggctccagct gggtcctacg ttcccccaa ctgagggatg
1620
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1800
cagagatgat gtcattccca gataccccaa ctgccgcccc caaagccctg gggcagtttg
1860
gaacgaccac acaaacacat aggtcccagc gtgtgtgctc ccagccccag ccccagccca
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1980
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1998


<210> 6094
<211> 136
<212> PRT
<213> Homo sapiens

<400> 6094
Met Ile Met Ser Ala Phe Arg Arg Glu Ser Pro Pro Thr Ser Val Pro
1               5                   10                  15
Pro Gln Met Gly Ile Tyr Leu Asp Leu Cys Gly Ser Phe Ser Ala Glu
            20                  25                  30
Thr Gly Pro Val Ser Gln Ser Phe Leu Gln Met Leu Ile Gly Val Cys
        35                  40                  45
Trp Asn Pro Lys Pro Leu Pro Arg Leu Gln Ala Pro Asp Gly Leu Leu
    50                  55                  60
Ser Cys Asn Phe Leu Gly Glu Glu Thr Phe Ser Ser Phe Pro Phe Leu
65                  70                  75                  80
Val His Pro Cys Thr Leu Val Leu Ser Gln Pro Leu Pro His Ile Val
```

```
                    85                      90                      95
Pro Asp Ser Arg Gly Thr Ser Ser Leu His Arg Ala Ala Ala Ala Gly
            100                     105                     110
Leu Arg Ala Glu Pro Val Gly Ala Glu Ala Leu Ala Pro Glu Val Gln
        115                     120                     125
Pro Leu Ser Leu Gly Pro Leu Gly
    130                     135


<210> 6095
<211> 441
<212> DNA
<213> Homo sapiens

<400> 6095
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120
ttctccctca gaagtggaa cgcggtggcc atgtggagct gggacgtgga gtgcgatacg
180
tgcgccatct gcagggtcca ggtgatggtg gtctggggag aatgtaatca ttccttccac
240
aactgctgta tgtccctgtg ggtgaaacag aacaatcgct gccctctctg ccagcaggac
300
tgggtggtcc aaagaatcgg caaatgagag tggttagaag gcttcttagc gcagttgttc
360
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420
aattcttcaa atagggaccg t
441


<210> 6096
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6096
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
1               5                   10                      15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
            20                  25                      30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
        35                  40                      45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Val Val Trp Gly Glu Cys
        50                  55                      60
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
65                  70                  75                      80
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
                85                  90                      95
Lys


<210> 6097
<211> 2404
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<212> DNA
<213> Homo sapiens

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120
ctgctgaaga accagtggtt tgtccgctgc caggaaatgg gggcccgagc tgccaaggct
180
gtggagtcgg gggccctgga gctcagtccc tccttccacc agaagaactg gcaacactgg
240
ttttcccata ttggggactg gtgtgtctcc cggcagctgt ggtggggcca tcagattcca
300
gcctacctgg ttntantagg accatgcgca nngggagaag agnngacctg ttgggtggtc
360
ggccggtcag gggctgaggc cagagagtta gcagcggaac tgacagggag gcaagggggca
420
gagccgaccc tggagaggga tcctgatgtc ctagacacat ggttttcttc tgccctgttc
480
cccttttctg ccctgggctg gccccaagag accccagacc ttgctcgttt ctaccccctg
540
tcacttttgg aaacgggcag cgaccttctg ctgttctggg tgggccgcat ggtcatgttg
600
gggacccagc tcacagggca gctgcccttc agcaaggtgc ttcttcatcc catggttcgg
660
gacaggcagg gccggaagat gagcaagtcc ctggggaatg tgctggaccc aagagacatc
720
atcagtgggg tggagatgca gttgctgcag gaaaagctga gaagcggaaa tttggaccct
780
gcagagctgg ccattgtggc tgcagcacag aaaaaggact tccctcacgg gatccctgag
840
tgtgggacag atgccctgag attcacactc tgctcccatg gagttcaggc gggcgacttg
900
cacctgtcag tctctgaggt ccagagctgc cgacatttct gcaacaagat ctggaatgct
960
cttcgcttta tcctcaatgc tttaggggag aaatttgtgc cacagcctgc tgaggagctg
1020
tctccctcct ccccgatgga tgcctggatc ctgagccgcc ttgccctggc tgcccaggag
1080
tgtgagcggg gcttcctcac ccgagagctc tcgctcgtca ctcatgccct gcaccacttc
1140
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1200
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1260
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1320
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1380
cactggcgcc agccagagct ggagcggcgc ttctcccggg tccaagaggt cgtgcaggtg
1440
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1500
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agctcagagc ctggggacca gggcctcttc gaggccttct tggagcccct gggcaccctg
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1620
caggctccac tcagtgacac ggctcaagtc tacatggagc tgcagggcct ggtggacccg
1680
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1740
ctcacagcca ggaccccatc agaaggggag gcagggactc agaggcaaca aaagctttct
1800
tccctccagc tggaattgtc aaaactggac aaggcagcct ctcacctccg gcagctgatg
1860
gatgagcctc cagccccagg gagcccggag ctctaactca tcatccccat cagttttcct
1920
ccctctcaga cctgtctttg aggacaaaca gatttgtcag ctgtcagggt gcagtgggac
1980
gtcagagact atgtggtcca tcgccttcat tgtgtaaatg aggacacaga ctggcttggt
2040
cgcagtgact gtggtgtcct tgagatgctc acattactgc ccggcctgcc tcccacctgg
2100
aagtctggga atgaggagat tgagataaac ttttgaaatc ccaaacatgt ctgtttatgg
2160
ctctttggtc ccctttgctc ccagtggtga cttttgtgct tctgagttgt cccctgagag
2220
cttggtctgg gaaaagagga ggaggggtcc tcactggagg aagaggaacc tttcagtcac
2280
ggggtaggta atgggacagt ggttccggtt ctacctcctt tcttggactg acaggtgcct
2340
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2400
gctt
2404


<210> 6098
<211> 631
<212> PRT
<213> Homo sapiens

<400> 6098
Arg Phe Val Ala Arg Glu Lys Ile Met Ser Val Leu Ser Glu Trp Gly
 1               5                   10                  15
Leu Phe Arg Gly Leu Gln Asn His Pro Met Val Leu Pro Ile Cys Ser
            20                  25                  30
Arg Ser Gly Asp Val Ile Glu Tyr Leu Leu Lys Asn Gln Trp Phe Val
        35                  40                  45
Arg Cys Gln Glu Met Gly Ala Arg Ala Ala Lys Ala Val Glu Ser Gly
    50                  55                  60
Ala Leu Glu Leu Ser Pro Ser Phe His Gln Lys Asn Trp Gln His Trp
65                  70                  75                  80
Phe Ser His Ile Gly Asp Trp Cys Val Ser Arg Gln Leu Trp Trp Gly
                85                  90                  95
His Gln Ile Pro Ala Tyr Leu Val Xaa Xaa Gly Pro Cys Ala Xaa Gly
            100                 105                 110
Glu Glu Xaa Thr Cys Trp Val Val Gly Arg Ser Gly Ala Glu Ala Arg
```

```
                115                      120                      125
       Glu Leu Ala Ala Glu Leu Thr Gly Arg Gln Gly Ala Glu Pro Thr Leu
           130                      135                      140
       Glu Arg Asp Pro Asp Val Leu Asp Thr Trp Phe Ser Ser Ala Leu Phe
       145                      150                      155                      160
       Pro Phe Ser Ala Leu Gly Trp Pro Gln Glu Thr Pro Asp Leu Ala Arg
                        165                      170                      175
       Phe Tyr Pro Leu Ser Leu Leu Glu Thr Gly Ser Asp Leu Leu Leu Phe
                    180                      185                      190
       Trp Val Gly Arg Met Val Met Leu Gly Thr Gln Leu Thr Gly Gln Leu
                    195                      200                      205
       Pro Phe Ser Lys Val Leu Leu His Pro Met Val Arg Asp Arg Gln Gly
           210                      215                      220
       Arg Lys Met Ser Lys Ser Leu Gly Asn Val Leu Asp Pro Arg Asp Ile
       225                      230                      235                      240
       Ile Ser Gly Val Glu Met Gln Leu Leu Gln Glu Lys Leu Arg Ser Gly
                        245                      250                      255
       Asn Leu Asp Pro Ala Glu Leu Ala Ile Val Ala Ala Ala Gln Lys Lys
                    260                      265                      270
       Asp Phe Pro His Gly Ile Pro Glu Cys Gly Thr Asp Ala Leu Arg Phe
                    275                      280                      285
       Thr Leu Cys Ser His Gly Val Gln Ala Gly Asp Leu His Leu Ser Val
           290                      295                      300
       Ser Glu Val Gln Ser Cys Arg His Phe Cys Asn Lys Ile Trp Asn Ala
       305                      310                      315                      320
       Leu Arg Phe Ile Leu Asn Ala Leu Gly Glu Lys Phe Val Pro Gln Pro
                        325                      330                      335
       Ala Glu Glu Leu Ser Pro Ser Ser Pro Met Asp Ala Trp Ile Leu Ser
                    340                      345                      350
       Arg Leu Ala Leu Ala Ala Gln Glu Cys Glu Arg Gly Phe Leu Thr Arg
                    355                      360                      365
       Glu Leu Ser Leu Val Thr His Ala Leu His His Phe Trp Leu His Asn
           370                      375                      380
       Leu Cys Asp Val Tyr Leu Glu Ala Val Lys Pro Val Leu Trp His Ser
       385                      390                      395                      400
       Pro Arg Pro Leu Gly Pro Pro Gln Val Leu Phe Ser Cys Ala Asp Leu
                        405                      410                      415
       Gly Leu Arg Leu Leu Ala Pro Leu Met Pro Phe Leu Ala Glu Glu Leu
                    420                      425                      430
       Trp Gln Arg Leu Pro Pro Arg Pro Gly Cys Pro Pro Ala Pro Ser Ile
                    435                      440                      445
       Ser Val Ala Pro Tyr Pro Ser Ala Cys Ser Leu Glu His Trp Arg Gln
           450                      455                      460
       Pro Glu Leu Glu Arg Arg Phe Ser Arg Val Gln Glu Val Val Gln Val
       465                      470                      475                      480
       Leu Arg Ala Leu Arg Ala Thr Tyr Gln Leu Thr Lys Ala Arg Pro Arg
                        485                      490                      495
       Val Leu Leu Gln Ser Ser Glu Pro Gly Asp Gln Gly Leu Phe Glu Ala
                    500                      505                      510
       Phe Leu Glu Pro Leu Gly Thr Leu Gly Tyr Cys Gly Ala Val Gly Leu
                    515                      520                      525
       Leu Pro Pro Gly Thr Ala Ala Pro Ser Gly Trp Ala Gln Ala Pro Leu
           530                      535                      540
       Ser Asp Thr Ala Gln Val Tyr Met Glu Leu Gln Gly Leu Val Asp Pro
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545                    550                   555                   560
Gln Ile Gln Leu Pro Leu Leu Ala Ala Arg Arg Tyr Lys Leu Gln Lys
                565                        570                   575
Gln Leu Asp Ser Leu Thr Ala Arg Thr Pro Ser Glu Gly Glu Ala Gly
                580                    585                   590
Thr Gln Arg Gln Gln Lys Leu Ser Ser Leu Gln Leu Glu Leu Ser Lys
            595                    600                   605
Leu Asp Lys Ala Ala Ser His Leu Arg Gln Leu Met Asp Glu Pro Pro
        610                    615                   620
Ala Pro Gly Ser Pro Glu Leu
625                    630
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<210> 6099
<211> 3957
<212> DNA
<213> Homo sapiens

<400> 6099
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120
ccagccccgg cctcccgcgg acccatgccc gcccgtatcg gctactacga gatcgaccgc
180
accatcggca agggcaactt cgcggtggtc aagcgggcca cgcacctcgt caccaaggcc
240
aaggttgcta tcaagatcat agataagacc cagctggatg aagaaaactt gaagaagatt
300
ttccgggaag ttcaaattat gaagatgctt tgccacccccc atatcatcag gctctaccag
360
gttatggaga cagaacggat gatttatctg gtgacagaat atgctagtgg aggggaaata
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480
cagatcgtca cagctgtcta ttttttgtcac tgtcggaaca ttgttcatcg tgatttaaaa
540
gctgaaaatt tacttctgga tgccaatctg aatatcaaaa tagcagattt tggtttcagt
600
aacctcttca ctcctgggca gctgctgaag acctggtgtg cagccctcc ctatgctgca
660
cctgaactct tgaaggaaa agaatatgat gggcccaaag tggacatctg gagccttgga
720
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780
ctgcgggccc gcgtgctgag tggaaagttc cgcatcccat tttttatgtc cacagaatgt
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900
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960
gctgaatgcc aacaactaaa ggaagaaaga caggtggacc ccctgaatga ggatgtcctc
1020
ttggccatgg aggacatggg actggacaaa gaacagacac tgcaggcgga gcaggcaggt
1080
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actgctatga acatcagcgt tccccaggtg cagctgatca acccagagaa ccaaattgtg
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gagccggatg ggacactgaa tttggacagt gatgagggtg aagagccttc ccctgaagca
1200
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1860
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1920
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1980
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2160
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2220
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2280
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2520
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2580
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2640
ccgccacact ataccacgtc ggcactacag caggccctgc tgtctcccac gccgccagac
2700
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tatacaagac accagcaggt accccacatc cttcaaggac tgctttctcc ccggcattcg
2760
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2820
cagcagcaac aacggcagca gcagcagcaa cagcagcaac agcaagaata ccaggaactg
2880
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3000
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3060
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3360
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3780
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3840
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3957


<210> 6100
<211> 1102
<212> PRT
<213> Homo sapiens

<400> 6100
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Leu Pro Pro Pro Ala Pro Gly Ser Pro Ala Ala Pro Ala Ala Val Ser
            20                  25                  30
Pro Ala Ala Gly Gln Pro Arg Pro Pro Ala Pro Ala Ser Arg Gly Pro
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                  35                    40                    45
Met Pro Ala Arg Ile Gly Tyr Tyr Glu Ile Asp Arg Thr Ile Gly Lys
        50                    55                    60
Gly Asn Phe Ala Val Val Lys Arg Ala Thr His Leu Val Thr Lys Ala
65                    70                    75                    80
Lys Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asp Glu Glu Asn
                  85                    90                    95
Leu Lys Lys Ile Phe Arg Glu Val Gln Ile Met Lys Met Leu Cys His
                  100                   105                   110
Pro His Ile Ile Arg Leu Tyr Gln Val Met Glu Thr Glu Arg Met Ile
        115                   120                   125
Tyr Leu Val Thr Glu Tyr Ala Ser Gly Gly Glu Ile Phe Asp His Leu
    130                   135                   140
Val Ala His Gly Arg Met Ala Glu Lys Glu Ala Arg Arg Lys Phe Lys
145                   150                   155                   160
Gln Ile Val Thr Ala Val Tyr Phe Cys His Cys Arg Asn Ile Val His
                  165                   170                   175
Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Asn Leu Asn Ile
                  180                   185                   190
Lys Ile Ala Asp Phe Gly Phe Ser Asn Leu Phe Thr Pro Gly Gln Leu
        195                   200                   205
Leu Lys Thr Trp Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe
    210                   215                   220
Glu Gly Lys Glu Tyr Asp Gly Pro Lys Val Asp Ile Trp Ser Leu Gly
225                   230                   235                   240
Val Val Leu Tyr Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Ser
                  245                   250                   255
Thr Leu Gln Asn Leu Arg Ala Arg Val Leu Ser Gly Lys Phe Arg Ile
                  260                   265                   270
Pro Phe Phe Met Ser Thr Glu Cys Glu His Leu Ile Arg His Met Leu
        275                   280                   285
Val Leu Asp Pro Asn Lys Arg Leu Ser Met Glu Gln Ile Cys Lys His
    290                   295                   300
Lys Trp Met Lys Leu Gly Asp Ala Asp Pro Asn Phe Asp Arg Leu Ile
305                   310                   315                   320
Ala Glu Cys Gln Gln Leu Lys Glu Glu Arg Gln Val Asp Pro Leu Asn
                  325                   330                   335
Glu Asp Val Leu Leu Ala Met Glu Asp Met Gly Leu Asp Lys Glu Gln
                  340                   345                   350
Thr Leu Gln Ala Glu Gln Ala Gly Thr Ala Met Asn Ile Ser Val Pro
        355                   360                   365
Gln Val Gln Leu Ile Asn Pro Glu Asn Gln Ile Val Glu Pro Asp Gly
    370                   375                   380
Thr Leu Asn Leu Asp Ser Asp Glu Gly Glu Glu Pro Ser Pro Glu Ala
385                   390                   395                   400
Leu Val Arg Tyr Leu Ser Met Arg Arg His Thr Val Gly Val Ala Asp
                  405                   410                   415
Pro Arg Thr Glu Val Met Glu Asp Leu Gln Lys Leu Leu Pro Gly Phe
        420                   425                   430
Pro Gly Val Asn Pro Gln Ala Pro Phe Leu Gln Val Ala Pro Asn Val
        435                   440                   445
Asn Phe Met His Asn Leu Leu Pro Met Gln Asn Leu Gln Pro Thr Gly
    450                   455                   460
Gln Leu Glu Tyr Lys Glu Gln Ser Leu Leu Gln Pro Pro Thr Leu Gln
```

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465                     470                     475                     480
Leu Leu Asn Gly Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly
                485                     490                     495
Ala Asn Ile Gln Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly
            500                     505                     510
Pro Ser Pro Leu Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro
            515                     520                     525
Val Asp Glu Glu Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln
        530                     535                     540
Ser Ser Thr Tyr Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg
545                     550                     555                     560
Phe Ser Pro Val Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Gln Ala
                565                     570                     575
Phe Lys Ala His Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln
                580                     585                     590
Leu Gln Gln Glu Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile
            595                     600                     605
Asp Glu Arg Thr Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln
        610                     615                     620
Gln Glu Gln His His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile
630                     635                     640
Cys Pro Pro Gln Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln
                645                     650                     655
Pro Ala Leu Leu Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser
            660                     665                     670
Ser Pro Pro Pro Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser
            675                     680                     685
Asn Ser Pro Pro Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala
        690                     695                     700
Ala Ser Ser Ser Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe
705                     710                     715                     720
Gln Gln Gln Pro Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr
                725                     730                     735
Cys Leu Gly Met Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln
            740                     745                     750
Val Gln Glu Pro Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala
        755                     760                     765
Gly Ser Ser Gly Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met
        770                     775                     780
Gln Met Gln His Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His
785                     790                     795                     800
Arg Pro Leu Ser Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser
                805                     810                     815
Leu Asn Val Asn Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu
            820                     825                     830
His Pro His Leu Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr
            835                     840                     845
Ser Pro Ser Thr Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val
            850                     855                     860
Pro Pro Leu Asp Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln
865                     870                     875                     880
Pro Pro His Tyr Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro
                885                     890                     895
Thr Pro Pro Asp Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln
```

```
                       900              905               910
Gly Leu Leu Ser Pro Arg His Ser Leu Thr Gly His Ser Asp Ile Arg
         915                920                925
Leu Pro Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln Gln
     930                 935                940
Arg Gln Gln Gln Gln Gln Gln Gln Gln Gln Glu Tyr Gln Glu Leu
945                 950                955                960
Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser Leu
                965                970                975
Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln Asn Ala
            980                985                990
Asp Ser Tyr His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln
         995               1000               1005
Leu Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser
    1010               1015               1020
Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met Gly
1025                1030               1035               1040
Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala Ser Leu
                1045               1050               1055
Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln His Leu Asn
                1060               1065               1070
Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile Leu Leu Ser Tyr
         1075               1080               1085
Lys His Pro Glu Val Ser Phe Ser Met Glu Gln Ala Gly Val
    1090               1095               1100
```

<210> 6101
<211> 1447
<212> DNA
<213> Homo sapiens

<400> 6101
```
tttttttttt tttttttttt tttttttttt ttttttttttc actgcaacca gtacttatgt
60
ttattactgt acctaataaa cagcccagcg tggtgattcc tattcactta gtagcctccc
120
catctagaaa tatactccgt gatctttctt gatggccaga ctgtgtaaaa ttcatacagt
180
gtttactaca gggatcccca aatattgtta gttgaatgaa caaacacaca tttcaaggag
240
ggcactacag tgagtagatg aacagttttc tgataggaga ttgtacaagt aatgttttca
300
ccagtgtatt ttaggacagc agattcagat taatgcgctg ggactgaatg caaatagtaa
360
aattacaaat ataaagtaaa aatttggaac ctttgccaca gagaggaata ataaattgat
420
ttaataattt gaaagaactg taaggtttag gttttgttct tatttttagt gcgactgaga
480
ttggagtctg tttgtagaca tatctgaaaa aagtgaaggg ggagatggaa gatggtaaat
540
gccaaggaaa agatggaagg ataaatcagt gtaataaaaa ggagcacttc ttttttcgcca
600
acagaagtaa aggtaaaggt taagtgtctg agttaacgaa tggattgttg acctctgggg
660
```

agggtgctcc catcagctca gctttgtgac gacctaagaa tatcccttcc acaccttttcc
720
tgatccaatc gttctggctg cataaaacca cctaaatcaa tcaactgtta cacttccctt
780
agtgctagga catattcata taactcccac gtattaaatg aaaatacatc catctaaaaa
840
taaaacaaca agattgctgc tacaccaaga aaggatttta aaaaggcctg ttcacaagct
900
aagtgagggc cagaggaaag gtgttcgttt aaactgaaat tcgagctgcg ataacacctc
960
ctaatgcaat caaacgctgt tgcagcacac ttcttaggag atcgggttca acggcaggga
1020
ttgggtaagg tgagaatctg gcttggcggc tccggccccg gccatctggt tcccttgggc
1080
tccggccgcc accatccact cgacggctct cggcccgaac gcttggtcgc accgcctgcc
1140
gaggtcctag atgaatcgct tcaggcctgg aaacgaggaa gccgtctccg gagaccatcg
1200
ccaacgctga cgcccgcggt ctgaggtcgc catgggaaga gcggtaggcc accctgctcc
1260
tctgatcacc ggaggacagg gacacattgt tcagggccat attcaaacac tgcccgcagt
1320
acttgcgtta cgtccctttg tgaaggcagg cccttcgcgg ctccccagat cagtccagcc
1380
tgtgtcggac ccgatgacta agcacacagg aacccataac tgagctgcgg aagagccaga
1440
agccgcc
1447

<210> 6102
<211> 123
<212> PRT
<213> Homo sapiens

<400> 6102
Met Ala Leu Asn Asn Val Ser Leu Ser Ser Gly Asp Gln Arg Ser Arg
1   5   10   15
Val Ala Tyr Arg Ser Ser His Gly Asp Leu Arg Pro Arg Ala Ser Ala
            20   25   30
Leu Ala Met Val Ser Gly Asp Gly Phe Leu Val Ser Arg Pro Glu Ala
        35   40   45
Ile His Leu Gly Pro Arg Gln Ala Val Arg Pro Ser Val Arg Ala Glu
    50   55   60
Ser Arg Arg Val Asp Gly Gly Gly Arg Ser Pro Arg Glu Pro Asp Gly
65   70   75   80
Arg Gly Arg Ser Arg Gln Ala Arg Phe Ser Pro Tyr Pro Ile Pro Ala
                85   90   95
Val Glu Pro Asp Leu Leu Arg Ser Val Leu Gln Gln Arg Leu Ile Ala
            100   105   110
Leu Gly Gly Val Ile Ala Ala Arg Ile Ser Val
        115   120

<210> 6103
<211> 309

<212> DNA
<213> Homo sapiens

<400> 6103
agatcttctt tttgagttct aggttctctg gaacacactc ctgaatgtgc acagcgccct
60
ctactgcttc ggccaggttg ccacagccac tgatgagaga cagctccagc cacaatggac
120
agaacctatg ccttgatgaa gaagattggg cagtccccag tgagagtcct gaaggagatt
180
gacggcttcg tcctgaaccg cctgcagtac gccgtcatca gtgaggcctg gagactggtg
240
gaggaagaaa tagtatctcc tagcgaccta gacctggtca tgtcagacgg gctgggcatg
300
cggtacgcg
309

<210> 6104
<211> 71
<212> PRT
<213> Homo sapiens

<400> 6104
Glu Thr Ala Pro Ala Thr Met Asp Arg Thr Tyr Ala Leu Met Lys Lys
 1   5   10   15
Ile Gly Gln Ser Pro Val Arg Val Leu Lys Glu Ile Asp Gly Phe Val
                20   25   30
Leu Asn Arg Leu Gln Tyr Ala Val Ile Ser Glu Ala Trp Arg Leu Val
            35   40   45
Glu Glu Glu Ile Val Ser Pro Ser Asp Leu Asp Leu Val Met Ser Asp
        50   55   60
Gly Leu Gly Met Arg Tyr Ala
 65   70

<210> 6105
<211> 1846
<212> DNA
<213> Homo sapiens

<400> 6105
ncaccagcag cagcaggcag ccttactcca cggggagggc gcctcacagc agccgcggca
60
caggggccag aaccggggat gcccccaac cctatgaact caacacagcc atcaactgca
120
gggatgaagt ggtgtctccc cttccatctg ctctgcaggg gtccctcagg ctccctatca
180
gccctccag ctgcctcagt tatctctgca cccccatctt cctcctcccg acatcgcaaa
240
cgtcgcagga cttccagcaa gtcggaggca ggggctaggg gtggaggcca gggttccaag
300
gaaaagggcc gagggagttg gggaggccgc caccaccacc accacccact gcctgcagca
360
ggcttcaaaa agcaacagcg caagttccag tatgggaatt attgcaaata ctatgggtac
420

```
cgcaatcctt cctgtgagga tgggcgcctt cgggtgttga agcctgagtg gtttcggggc
480
cgggacgtcc tagatctggg ctgcaatgtg ggccatctga ccctgagcat tgcctgcaag
540
tggggcccgt cccgcatggt gggcctggat atcgattccc ggctcatcca ttctgcccgc
600
caaaacatcc gacactacct ttccgaggag ctgcgtctcc caccccagac tttggaaggg
660
gacccggggg cagagggtga ggaagggacc accaccgttc gaaagaggag ctgcttccca
720
gcctcgctga ctgccagccg gggtcccatc gctgccccc aagtgccctt ggatggagcg
780
gacacatcag tcttccccaa caatgttgtc ttcgtcacgg gtaattatgt gctggatcga
840
gatgacctgg tggaggccca aacacctgag tatgatgtgg tgctctgcct cagcctcacc
900
aagtgggtgc atctgaactg gggagacgag ggcctgaagc gcatgtttcg ccggatctac
960
cggcacctac gccctggggg catcctggtc ctagagcccc aaccctggtc gtcgtatggc
1020
aagagaaaga ctcttacaga aacgatctac aagaactact accgaatcca attgaagcca
1080
gagcagttca gttcctacct gacatcccca gacgtgggct ctccagcta tgagcttgtg
1140
gccacacccc acaacacctc taaaggcttc cagcgtcctg tgtacctgtt ccacaaggcc
1200
cgatccccca gccactaagt ggccccctaa acagaaagtg tgaagaggct gccctcgctg
1260
ctcataagga cctgggggaa gaggaaagtg tcccaaggtc tttcctttct gactccaaaa
1320
atagtttcct ttcttggatc tgcaaagaaa gcttttcttc cgtcgctgcc tcagcctcct
1380
ccctatgcct ctggcacctg cgcagcaagg ctggctgtgc tggagtcacc atcatcttcc
1440
tctcccccag cctcccaggc tggatggcat ggactgtttg ctgacctctg ttctcttagg
1500
gcatgggagg tgggaggata tcaaattctc tagccctttc ctcctattct ctagcccttc
1560
tattctccca aggagagaga ttcccatttc tcctcggcca ttgtacctag ctcttgtccc
1620
tagctgcatt tcagtggacc atggatagag ggactgaggg ttagacgggg aagactggca
1680
gggaggcacg caggtactgt gaaaatcctt ccctttgccc tcccccagtg ggagaggggg
1740
ttgggttttc aatgtgagaa cagcacaata aacttgatgt ctaggcagt ggcccccaaa
1800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
1846
```

```
<210> 6106
<211> 405
<212> PRT
<213> Homo sapiens
```

```
<400> 6106
Xaa Pro Ala Ala Ala Gly Ser Leu Thr Pro Arg Gly Gly Arg Leu Thr
 1               5                  10                  15
Ala Ala Ala Ala Gln Gly Pro Glu Pro Gly Met Pro Pro Asn Pro Met
            20                  25                  30
Asn Ser Thr Gln Pro Ser Thr Ala Gly Met Lys Trp Cys Leu Pro Phe
        35                  40                  45
His Leu Leu Cys Arg Gly Pro Ser Gly Ser Leu Ser Ala Pro Pro Ala
    50                  55                  60
Ala Ser Val Ile Ser Ala Pro Pro Ser Ser Ser Ser Arg His Arg Lys
65                  70                  75                  80
Arg Arg Arg Thr Ser Ser Lys Ser Glu Ala Gly Ala Arg Gly Gly Gly
                85                  90                  95
Gln Gly Ser Lys Glu Lys Gly Arg Gly Ser Trp Gly Gly Arg His His
            100                 105                 110
His His His Pro Leu Pro Ala Ala Gly Phe Lys Lys Gln Gln Arg Lys
    115                 120                 125
Phe Gln Tyr Gly Asn Tyr Cys Lys Tyr Tyr Gly Tyr Arg Asn Pro Ser
    130                 135                 140
Cys Glu Asp Gly Arg Leu Arg Val Leu Lys Pro Glu Trp Phe Arg Gly
145                 150                 155                 160
Arg Asp Val Leu Asp Leu Gly Cys Asn Val Gly His Leu Thr Leu Ser
                165                 170                 175
Ile Ala Cys Lys Trp Gly Pro Ser Arg Met Val Gly Leu Asp Ile Asp
            180                 185                 190
Ser Arg Leu Ile His Ser Ala Arg Gln Asn Ile Arg His Tyr Leu Ser
            195                 200                 205
Glu Glu Leu Arg Leu Pro Pro Gln Thr Leu Glu Gly Asp Pro Gly Ala
    210                 215                 220
Glu Gly Glu Glu Gly Thr Thr Thr Val Arg Lys Arg Ser Cys Phe Pro
225                 230                 235                 240
Ala Ser Leu Thr Ala Ser Arg Gly Pro Ile Ala Ala Pro Gln Val Pro
                245                 250                 255
Leu Asp Gly Ala Asp Thr Ser Val Phe Pro Asn Asn Val Val Phe Val
            260                 265                 270
Thr Gly Asn Tyr Val Leu Asp Arg Asp Asp Leu Val Glu Ala Gln Thr
        275                 280                 285
Pro Glu Tyr Asp Val Val Leu Cys Leu Ser Leu Thr Lys Trp Val His
    290                 295                 300
Leu Asn Trp Gly Asp Glu Gly Leu Lys Arg Met Phe Arg Arg Ile Tyr
305                 310                 315                 320
Arg His Leu Arg Pro Gly Gly Ile Leu Val Leu Glu Pro Gln Pro Trp
                325                 330                 335
Ser Ser Tyr Gly Lys Arg Lys Thr Leu Thr Glu Thr Ile Tyr Lys Asn
            340                 345                 350
Tyr Tyr Arg Ile Gln Leu Lys Pro Glu Gln Phe Ser Ser Tyr Leu Thr
        355                 360                 365
Ser Pro Asp Val Gly Phe Ser Ser Tyr Glu Leu Val Ala Thr Pro His
    370                 375                 380
Asn Thr Ser Lys Gly Phe Gln Arg Pro Val Tyr Leu Phe His Lys Ala
385                 390                 395                 400
Arg Ser Pro Ser His
            405
```

<210> 6107
<211> 896
<212> DNA
<213> Homo sapiens

<400> 6107
nnaaatttga cccgcacagt gatgaggcca gggctgggag ggaggcaggg tctatcctca
60
gatctcaggg gggcctctgg actgctgctg cctgcacctg cttgtctttt gggcaggcct
120
tggatgtcaa ggagatgctc aaggctgggc tcaacaccac ccccagctcc agcctcccca
180
gtggagtctc cccgaccttc acccgcctct tcagccttct catcattacc ctctgatgga
240
tgggggagtt cagttggctc ggggttgcct tggcctgcca ccaggtggtc cacatgcccc
300
aggtggagga cggatgtgtc gcctgctgac acaatagcgc ccaggagctg gttgctaccg
360
ctgtctgcta cgtaggtaga gagccaagct aggaccaagg ctagaatcag caccaccaca
420
cctgccacca ccatcacctc attacccaca ccctcaatga gggtgacatc agtgaccccc
480
ttagccgacc ctactcctca ctggccggga caactggtct tatcacggag gctggggcca
540
ggcagccctt cggttcgggt gggcccagac cccagtccaa cgccgaggga ataggaccat
600
ccaaaagcgg aaccttcgcc tcagaaaaag ggtgcgggac ccctcctcac cgtgcggtca
660
cggtacggac agggtagatc acaggctgag ggacagagca aagacccctg aggccggaca
720
cctggggtcc tgccgggccc ctccccacga gagttccctg tgtctgtgcc aatcgttttc
780
gtctttcttt gccgcagttt cttttcctgt aaatcatggt taatgacatt aaccttctta
840
ccatcagggg ttagttgtgg ttgtgataaa taattactac cgttattaag caattg
896

<210> 6108
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6108
Xaa Asn Leu Thr Arg Thr Val Met Arg Pro Gly Leu Gly Gly Arg Gln
1   5   10   15
Gly Leu Ser Ser Asp Leu Arg Gly Ala Ser Gly Leu Leu Leu Pro Ala
            20   25   30
Pro Ala Cys Leu Leu Gly Arg Pro Trp Met Ser Arg Arg Cys Ser Arg
            35   40   45
Leu Gly Ser Thr Pro Pro Ala Pro Ala Ser Pro Val Glu Ser Pro
        50   55   60
Arg Pro Ser Pro Ala Ser Ser Ala Phe Ser Ser Leu Pro Ser Asp Gly
65   70   75   80
Trp Gly Ser Ser Val Gly Ser Gly Leu Pro Trp Pro Ala Thr Arg Trp

```
                        85                    90                    95
     Ser Thr Cys Pro Arg Trp Arg Thr Asp Val Ser Pro Ala Asp Thr Ile
               100                   105                   110
     Ala Pro Arg Ser Trp Leu Leu Pro Leu Ser Ala Thr
               115                   120
```

```
<210> 6109
<211> 2087
<212> DNA
<213> Homo sapiens

<400> 6109
aggccggaag cgcgcggaga ccatgtagtg agaccctcgc gaggtctgag agtcactgga
60
gctaccagaa gcatcatggg gccctgggga gagccagagc tcctggtgtg gcgccccgag
120
ggtagcttca gagcctccag tgcctgtggg gctggaggtg aagttggggg ccctggtgct
180
gctgctggtc tcaccctcct ctgcagcctg gtgcccatct gtgtgctgcg ccggccagga
240
gctaaccatg aaggctcagc ttcccgccag aaagccctga gcctagtaag ctgtttcgcg
300
ggggcgtct ttttggccac ttgtctcctg gacctgctgc ctgactacct ggctgccata
360
gatgaggccc tggcagcctt gcacgtgacg ctccagttcc cactgcaaga gttcatcctg
420
gccatgggct tcttcctggt cctggtgatg gagcagatca cactggctta caaggagcag
480
tcagggccgt cacctctgga ggaaacaagg gctctgctgg gaacagtgaa tggtgggccg
540
cagcattggc atgatgggcc aggggtccca caggcgagtg gagccccagc aaccccctca
600
gccttgcgtg cctgtgtact ggtgttctcc ctggccctcc actccgtgtt cgaggggctg
660
gcggtagggc tgcagcgaga ccgggctcgg gccatggagc tgtgcctggc tttgctgctc
720
cacaagggca tcctggctgt cagcctgtcc ctgcggctgt tgcagagcca ccttagggca
780
caggtggtgg ctggctgtgg gatcctcttc tcatgcatga cacctctagg catcgggctg
840
ggtgcagctc tggcagagtc ggcaggacct ctgcaccagc tggcccagtc tgtgctagag
900
ggcatggcag ctggcacctt tctctatatc acctttctgg aaatcctgcc ccaggagctg
960
gccagttctg agcaaaggat cctcaaggtc attctgctcc tagcaggctt tgccctgctc
1020
actggcctgc tcttcatcca aatctagggg gcttcaagag aggggcaggg gagattgatg
1080
atcaggtgcc cctgttctcc cttccctccc ccagttgtgg ggaataggaa ggaaagggga
1140
agggaaatac tgaggaccaa aaagttctct gggagctaaa gatagagcct ttggggctat
1200
ctgactaatg agagggaagt gggcagacaa gaggctggcc ccagtcccaa ggaacaagag
1260
```

atggtcaagt cgctagagac atatcagggg acattaggat tggggaagac acttgactgc
1320

tagaatcaga ggttggacac tatacataag gacaggctca catgggaggc tggaggtggg
1380

tacccagctg ctgtggaacg ggtatggaga ggtcataaac ctagagtcag tgtcctgttg
1440

gtcctagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
1500

ctaccctcat acctatctcc ctcctcccat ctcctagggg actggcgcca aatggtctct
1560

ccctgccaat tttggtatct tctctggcct ctccagtcct gcttactcct ctatttttaa
1620

agtgccaaac aaatcccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
1680

ccagcacctc agtgaagggg gcctgcttgc tctttatttt ggtcccggat cctggggtgg
1740

ggcagaaata ttttctgggc tggggtagga ggaaggttgt tgcagccatc tactgctgct
1800

gtaccctagg aatatgggga catggacatg gtgtcccatg cccagatgat aaacactgag
1860

ctgccaaaac atttttttaa atacacccga ggagcccaag ggggaagggc aatgcctacc
1920

cccagcgtta tttttgggga gggagggctg tgcataggga catattcttt agaatctatt
1980

ttattaactg acctgttttg ggacctgtta cccaaataaa agatgtttct agacatctgt
2040

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
2087

<210> 6110
<211> 323
<212> PRT
<213> Homo sapiens

<400> 6110
Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp Arg Pro Glu Gly
1   5   10   15
Ser Phe Arg Ala Ser Ser Ala Cys Gly Ala Gly Gly Glu Val Gly Gly
            20   25   30
Pro Gly Ala Ala Ala Gly Leu Thr Leu Leu Cys Ser Leu Val Pro Ile
        35   40   45
Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser Arg
        50   55   60
Gln Lys Ala Leu Ser Leu Val Ser Cys Phe Ala Gly Gly Val Phe Leu
65   70   75   80
Ala Thr Cys Leu Leu Asp Leu Leu Pro Asp Tyr Leu Ala Ala Ile Asp
                85   90   95
Glu Ala Leu Ala Ala Leu His Val Thr Leu Gln Phe Pro Leu Gln Glu
            100   105   110
Phe Ile Leu Ala Met Gly Phe Phe Leu Val Leu Val Met Glu Gln Ile
            115   120   125
Thr Leu Ala Tyr Lys Glu Gln Ser Gly Pro Ser Pro Leu Glu Glu Thr
        130   135   140
Arg Ala Leu Leu Gly Thr Val Asn Gly Gly Pro Gln His Trp His Asp

```
145                    150                    155                    160
Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
                 165                    170                    175
Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
             180                    185                    190
Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
         195                    200                    205
Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
     210                    215                    220
Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
225                    230                    235                    240
Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
                 245                    250                    255
Ala Ala Leu Ala Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
             260                    265                    270
Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
         275                    280                    285
Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
     290                    295                    300
Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
305                    310                    315                    320
Ile Gln Ile
```

```
<210> 6111
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 6111
nnagatctgc ctgcctctct gcccccaaag tggtgggatt acaggtgtga gccactgctc
60
ccagccaaga aattctttat atgtagatac tattttcttg tcaagttcag atgttggaaa
120
taacttgcca tttgttcatt cttgtctttg ttgtttttca tataatagaa atcccccaa
180
tgtttatat cttttatgtc tttattttgt tttgttttgt ttttgagatg gagtttccct
240
cttgttgccc aggctggagt gnagtggcac agtctcggct cactgcaacc tccacttcct
300
gggttcaagc agttctcgtg ccgcagcctc ccaagtagct gggactacag gcatgcgcca
360
ccacgccagg ctaatttttg tatttttagt agagatgggg tttcaccatg ttggccgggc
420
tggtctcaaa ctcctgacct caggcgatcc acccacctca gcgtcccaaa gtgctgggat
480
tataggcgtg agccaccgca cctggcctat gagtggtctt ttaattagga acaaatctaa
540
tggaaaggag agttgactga agttggccca caggattgtg agctgggcag tgccttcatg
600
aaggcttgcc accttgggac gccccagttt actggggtgt cttgcggagt gcagaaggct
660
ttctggcagc tgcctgggtt tggccagacc ctgcctcccc tcccgccggc caacccctag
720
```

```
tcccccttcct gtctccactt gcattcaggg gtggctgctg ttctgagaac attagaactg
780
ggaagagaga tggagtcaca tggatttttg gtgggcatta ttctgaactt tcgtatccaa
840
gttagtcccc cttattccac tgtggcattg ccgttctaag cagttacctg atgcctgctg
900
ctgaagagct gctcacagga ggcggcggcg gccctggcac tgccccttgc attaggtctt
960
gtgtttgatg tgttcttgtg aatttacttt gtcagaacaa aatatttacg cgttgggttc
1020
aggaatttct tttagctccc catctggctg tgaaattcag gaaacctccc gttgcctagt
1080
aatcacccca tgtaggtgta cattgtgaca aagtgcatct gaccactaag gggccccctt
1140
ggtgacccca gcacattcac agcagtgtta aaatggcctg cattttggag atgctggctg
1200
gcctttcagt gcctcccagg aagacacatg gcctttccct cttcagatgc ctgaagggag
1260
tgctttgagg caggtgatgt gctgggagtg tgggcggcct ccctctggcc ccggggccct
1320
ctgtggacct tggctccctc cgtggacctg ggcttcgtgg tgagcactgc agcctccctg
1380
ggcattccct ccagcgccag caccactgca acatatagac ctgagtgcta ttgtattttg
1440
gcttggtgtg tatgctcttc attgtgtaaa attgctgttc ttttgacaat ttaagtgatt
1500
gttttgttta ctgtaagttt gaaaataaaa atgaagaaaa aaaattccaa tgactgtgct
1560
gtggttggag actttatttta ccaagatgtt tactcttcct ttccccttcc attttgagga
1620
gctgtgtcac tcctcctccc ccccagtgct ttgtagtctc tcctatgtca taataaagct
1680
acattttctc tgaaaaaaaa aaaaaa
1706


<210> 6112
<211> 110
<212> PRT
<213> Homo sapiens

<400> 6112
Met Ser Leu Phe Cys Phe Val Leu Phe Leu Arg Trp Ser Phe Pro Leu
1               5                   10                  15
Val Ala Gln Ala Gly Val Xaa Trp His Ser Leu Gly Ser Leu Gln Pro
                20                  25                  30
Pro Leu Pro Gly Phe Lys Gln Phe Ser Cys Arg Ser Leu Pro Ser Ser
            35                  40                  45
Trp Asp Tyr Arg His Ala Pro Pro Arg Gln Ala Asn Phe Cys Ile Phe
        50                  55                  60
Ser Arg Asp Gly Val Ser Pro Cys Trp Pro Gly Trp Ser Gln Thr Pro
65                  70                  75                  80
Asp Leu Arg Arg Ser Thr His Leu Ser Val Pro Lys Cys Trp Asp Tyr
                85                  90                  95
Arg Arg Glu Pro Pro His Leu Ala Tyr Glu Trp Ser Phe Asn
```

                    100   105   110

<210> 6113
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 6113
nncggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgatgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctagta agtggggtcg ggaggcgggc gtggagggac ccacgtctgg aagttgctgc
240
agccaccacg acgctcttct acggctacgg ctttgtctct gctggtatgg gggtgggagc
300
atacgcgtag gccttggccc tatttcctgg tagaaccgag agttggaagt ccctacggcg
360
atcatgttaa ccgcgcgggc tcattctgcg gaacgaagcc gggcagaggg tggggaagac
420
taggctagat tttcgtaagg aagcagcgtc tgagccaggt ttgaggccca atattttctt
480
tccgtggcca cgtgcagact ggcccaggtg agagctgaga atcgcctccc agactcagtg
540
ttcctctcct gccttatgat tcgtgctgtt tgacacgaag tggttgtcgt tttgtgtctc
600
atacgctgtt gtgtatgatc ccattctaat attgtgaggg taagtgcagg gaattttgac
660
tccattctgg atctactgaa tttaattctc tgggatttga aagtagcacg tatgtttgca
720
ttaggcattt cgcattagac ttaacgttag gtttggtagc caataacaca agaaaaggat
780
ataactccat agtgcgttaa cccagaacta atcatttggg ttaacagatt tgtgatgtgt
840
ttctttgtag agttaaagaa agcaagtaaa cgcatgacct gccataagcg gtataaaatc
900
caaaaaaagg ttcgagaaca tcatcgaaaa ttaagaaagg aggctaaaaa gcggggtcac
960
aagaagccta ggaaagaccc aggagttcca acagtgctc cctttaagga ggctcttctt
1020
gaggaagctg agctaaggaa acagaggctt gaagaactaa aacagcagca gaaacttgac
1080
aggcagaagg aacta
1095

<210> 6114
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6114
Met Cys Phe Phe Val Glu Leu Lys Lys Ala Ser Lys Arg Met Thr Cys

```
 1                    5                    10                    15
His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
             20                   25                   30
Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
         35                   40                   45
Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
     50                   55                   60
Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys
65                   70                   75                   80
Leu Asp Arg Gln Lys Glu Leu
                 85
```

```
<210> 6115
<211> 411
<212> DNA
<213> Homo sapiens
```

```
<400> 6115
gcgcgcctgg ccccgccagg gcctaagttc cctgcactcg cttccccgcc tgtcgccgcc
60
gccgccgccc gcagccctcc ttctcgtggg cgctggggaa gaaactcgtc ggcgggtcta
120
actgtggcgt cccagggcgg tggagggagc aacttcgggg gcacgtcctc gtaaatcccg
180
tggaggacac tgaccctgta ccccacccctc gaggccagaa gtcggttcct ttgggggaac
240
tgaggggcga gagcactcgc cccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
360
gaatgaactt gagaagagtt tgtagccatt cctgaatcac cttatactag t
411
```

```
<210> 6116
<211> 129
<212> PRT
<213> Homo sapiens
```

```
<400> 6116
Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
1                    5                    10                   15
Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
             20                   25                   30
Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
         35                   40                   45
Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
     50                   55                   60
Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
65                   70                   75                   80
Leu Pro Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
                 85                   90                   95
Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala Ala
                 100                  105                  110
Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg
```

                    115   120   125
Arg

<210> 6117
<211> 962
<212> DNA
<213> Homo sapiens

<400> 6117
cttccgcctt ccccaagcca acgtctccgc cgtcggctcc gcggcgccgc catggccgac
60
gtggaagacg gagaggaaac ctgcgccctg gcctctcact ccgggagctc aggctccaag
120
tcgggaggcg acaagatgtt ctccctcaag aagtggaacg cggtggccat gtggagctgg
180
gacgtggagt gcgatacgtg cgccatctgc agggtccagg tgatggatgc ctgtcttaga
240
tgtcaagctg aaaacaaaca agaggactgt gttgtggtct ggggagaatg taatcattcc
300
ttccacaact gctgcatgtc cctgtgggtg aaacagaaca tcgctgccc tctctgccag
360
caggactggg tggtccaaag aatcggcaaa tgagagtggt tagaaggctt cttagcgcag
420
ttgttcagag ccctggtgga tcttgtaatc cagtgcccta caaaggctag aacactacag
480
gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catcaaagcc
540
ttggtttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
600
attaaaggtg gtccttccta cctctgtggt gtgtgtcgcg cacacagctt agaagtgcta
660
taaaaaagga aagagctcca aattgaatca cctttataat ttacccattt ctatacaaca
720
ggcagtggaa gcagtttcag agaacttttt gcatgcttat ggttgatcag ttaaaaaaga
780
atgttacagt aacaaataaa gtgcagttta aaacccaact cttactctta atttgttcct
840
aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
900
tttaagtttg ggccagtgaa cagggtaaat aaaatttaac ttttgagcat aaaaaaaaaa
960
aa
962

<210> 6118
<211> 113
<212> PRT
<213> Homo sapiens

<400> 6118
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1   5   10   15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu

```
                    20                    25                    30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
            35              ·    ·    40                   45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
    50                      55    ·                   60
Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
65                           70              75                 ·80
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
                    85                    90                    95
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
                    100                   105                   110
Lys
```

<210> 6119
<211> 375
<212> DNA
<213> Homo sapiens

<400> 6119
```
accggttgac aacctcccta tggggaagct agatacagcc ccatggacat gccccactga
60
cccccacacc ccacacggac tgcacggaaa tatcacagta accatctctc agtcacagcg
120
tggccccaca gaactcatgc ctgcttgctt taaacccacc aatgaaaact ccccatggga
180
aacctgcttg gataatactt tggaccccaa taaatgcttt aatcccacaa gtcctctgtc
240
tctgcctctc tcttgcccct acccactggt tgagcatgtg tgtcccaaac ggccctgcaa
300
ggtgtgctgc cctgttcttt ctgggctctg tcaaggaatc aaactgcttc tgttatgtga
360
tgtgtcatgt tgtgc
375
```

<210> 6120
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6120
```
Met Gly Lys Leu Asp Thr Ala Pro Trp Thr Cys Pro Thr Asp Pro His
1                   5                   10                   15
Thr Pro His Gly Leu His Gly Asn Ile Thr Val Thr Ile Ser Gln Ser
                    20                   25                   30
Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
            35                   40                   45
Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
    50                   55                   60
Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
65                   70                   75                 80
Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
                    85                   90                 95
Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu Leu
```

                         100   105   110
Cys Asp Val Ser Cys Cys
            115

<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens

<400> 6121
gacggaacgg cggtggtggc ccgcggaccg gacggggcac tatgaacgaa gaggagcagt
60
ttgtaaacat tgatttgaat gatgacaaca tttgcagtgt ttgtaaactg ggaacagaca
120
aagaaacact ctccttctgc cacatttgtt ttgagctaaa tattgagggg gtaccaaagt
180
ctgatctctt gcacaccaaa tcattaaggg gccataaaga ctgctttgaa aaataccatt
240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gtttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaaatgga
480
tagatggaag tgcaggtggc atctctaact gtacacaaag aattttggag cagagggaaa
540
atacagactt tggactttct atgttacaag attcaggtgc cactttatgt cgtaacagtg
600
tattgtggcc tcatagtcac aaccaggcac agaaaaaga agagacaatc tctagtccag
660
aggctaatgt ccagacccag catccacatt acagcagaga ggaataagtt tttgaagagt
720
taactcacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgttg
780
ccatcgaaca gcttctgaag aactgttcta agttaccatg tctgcaagta gggcgaacag
840
gaatgaagtc gcacctaccc ataaacaact gacctaaaca gacttacttc gtatgccctg
900
cccttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtggtccg
960
ttttttatg gtcattaaat ttgccaaaca taaggcagta tttaacatct ttgtcaaata
1020
aagcagatca ttatactct
1039

<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens

<400> 6122
Met Asn Glu Glu Glu Gln Phe Val Asn Ile Asp Leu Asn Asp Asp Asn

```
  1              5                  10                 15
Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe
             20                  25                 30
Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp
             35                  40                 45
Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys
      50                  55                 60
Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys
65                  70                  75                    80
Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp
             85                  90                 95
Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys
             100                 105                110
Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu
      115                 120                 125
Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala
      130                 135                 140
Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg
145                 150                 155                160
Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln
             165                 170                175
Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser
             180                 185                190
His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala
      195                 200                 205
Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu
      210                 215                 220
```

<210> 6123
<211> 900
<212> DNA
<213> Homo sapiens

<400> 6123
```
ntgcatgcct gtataccaca gctactcggg aggctgaggc gggagaatcg cttgaaccca
60
ggaggcggag gttgcggtga gctgagatcg caccattgca ctccagcctg ggcaacaaga
120
gcgaaacaac aagagaaaaa aaaggaagct gccctctgcc caaaacccac gtcgaggtcc
180
ccaaacctgg gacccttagg tcttttctca cttagcgtgc ccaaccttct cctggcagga
240
aacaagcctc caggtctgct tccccgcaaa ggactataca tggcaaatga cttaaagctc
300
ctgagacacc atctccagat tcccatccac ttccccaagg atttcttgtc tgtgatgctt
360
gaaaaaggaa gtttgtctgc catgcgtttc ctcaccgccg tgaacttgga gcatccagag
420
atgctggaga aagcgtcccg ggagctgtgg atgcgcgtct ggtcaagggt gagtgtgggg
480
ctctgggaat cctctgggag gaccttggat gactttctga ccttccccag gcacgttttc
540
agggtcatga tcctgccccc gcccggggga tctactgtcc tcccagtcac acccctctcc
600
```

```
ccgcaccgcc ttcctgctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
660
agcatcctgg cggctgcaga gaaggctggt atgtctgcag aacaagccca gggacttctg
720
gaaaagatcg caacgccaaa ggtgaagaac cagctcaagg agaccactga ggcagcctgc
780
agatacggag cctttgggct gcccatcacc gtggcccatg tggatggcca aacccacatg
840
ttatttggct ctgaccggat ggagctgctg cgcacctgc tgggagagaa gtggatgggc
900
```

```
<210> 6124
<211> 300
<212> PRT
<213> Homo sapiens

<400> 6124
Xaa His Ala Cys Ile Pro Gln Leu Leu Gly Arg Leu Arg Arg Glu Asn
1               5                   10                  15
Arg Leu Asn Pro Gly Gly Gly Gly Cys Gly Glu Leu Arg Ser His His
            20                  25                  30
Cys Thr Pro Ala Trp Ala Thr Arg Ala Lys Gln Gln Glu Lys Lys Lys
        35                  40                  45
Glu Ala Ala Leu Cys Pro Lys Pro Thr Ser Arg Ser Pro Asn Leu Gly
    50                  55                  60
Pro Leu Gly Leu Phe Ser Leu Ser Val Pro Asn Leu Leu Leu Ala Gly
65                  70                  75                  80
Asn Lys Pro Pro Gly Leu Leu Pro Arg Lys Gly Leu Tyr Met Ala Asn
                85                  90                  95
Asp Leu Lys Leu Leu Arg His His Leu Gln Ile Pro Ile His Phe Pro
            100                 105                 110
Lys Asp Phe Leu Ser Val Met Leu Glu Lys Gly Ser Leu Ser Ala Met
        115                 120                 125
Arg Phe Leu Thr Ala Val Asn Leu Glu His Pro Glu Met Leu Glu Lys
    130                 135                 140
Ala Ser Arg Glu Leu Trp Met Arg Val Trp Ser Arg Val Ser Val Gly
145                 150                 155                 160
Leu Trp Glu Ser Ser Gly Arg Thr Leu Asp Asp Phe Leu Thr Phe Pro
                165                 170                 175
Arg His Val Phe Arg Val Met Ile Leu Pro Pro Pro Gly Gly Ser Thr
            180                 185                 190
Val Leu Pro Val Thr Pro Leu Ser Pro His Arg Leu Pro Ala Val Phe
        195                 200                 205
Ser Ser Ser Gln Asn Glu Asp Ile Thr Glu Pro Gln Ser Ile Leu Ala
    210                 215                 220
Ala Ala Glu Lys Ala Gly Met Ser Ala Glu Gln Ala Gln Gly Leu Leu
225                 230                 235                 240
Glu Lys Ile Ala Thr Pro Lys Val Lys Asn Gln Leu Lys Glu Thr Thr
                245                 250                 255
Glu Ala Ala Cys Arg Tyr Gly Ala Phe Gly Leu Pro Ile Thr Val Ala
            260                 265                 270
His Val Asp Gly Gln Thr His Met Leu Phe Gly Ser Asp Arg Met Glu
        275                 280                 285
Leu Leu Ala His Leu Leu Gly Glu Lys Trp Met Gly
```

                    290   295   300

<210> 6125
<211> 468
<212> DNA
<213> Homo sapiens

<400> 6125
nctacagtca ctcaggagaa gtcccgcatg gaggcttctt acttggctga caagaaaaag
60
atgaaacagg acttagagga tgccagtaac aaggcggagg aggagagggc ccgcctggag
120
ggagaattga aggggctgca ggagcaaata gcagaaacca aagcccggct tatcacgcag
180
cagcatgatc gggcccaaga gcagagtgac catgccttga tgctgcgtga gctccagaag
240
ctgctgcagg aggagaggac ccagcgccag gacttggagc ttaggttaga agagacccga
300
gaagccttgg caggacgagc atatgcagct gaacagatgg aaggatttga actgcagacc
360
aagcagctga cccgtgaggt ggaggagctg aaaagtgaac tgcaggccat tcgagatgag
420
aagaatcagc cagacccccg gctgcaagaa cttcaggaag aggccgcc
468

<210> 6126
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6126
Xaa Thr Val Thr Gln Glu Lys Ser Arg Met Glu Ala Ser Tyr Leu Ala
 1   5   10   15
Asp Lys Lys Met Lys Gln Asp Leu Glu Asp Ala Ser Asn Lys Ala
            20   25   30
Glu Glu Glu Arg Ala Arg Leu Glu Gly Glu Leu Lys Gly Leu Gln Glu
        35   40   45
Gln Ile Ala Glu Thr Lys Ala Arg Leu Ile Thr Gln Gln His Asp Arg
    50   55   60
Ala Gln Glu Gln Ser Asp His Ala Leu Met Leu Arg Glu Leu Gln Lys
65   70   75   80
Leu Leu Gln Glu Glu Arg Thr Gln Arg Gln Asp Leu Glu Leu Arg Leu
                85   90   95
Glu Glu Thr Arg Glu Ala Leu Ala Gly Arg Ala Tyr Ala Ala Glu Gln
            100   105   110
Met Glu Gly Phe Glu Leu Gln Thr Lys Gln Leu Thr Arg Glu Val Glu
        115   120   125
Glu Leu Lys Ser Glu Leu Gln Ala Ile Arg Asp Glu Lys Asn Gln Pro
    130   135   140
Asp Pro Arg Leu Gln Glu Leu Gln Glu Glu Ala Ala
145   150   155

<210> 6127
<211> 1900

<212> DNA
<213> Homo sapiens

<400> 6127
gtttcctgga ttacaggcca ggcantggag ataggcagcn ncagcctgac tatcctggta
60
gaatgctggg atgggcacct gacaccccct gaggttgcat ccctggctga cagggcatca
120
cgggcaagag actccaatat ggtgagggcg gcagcagagc tggccctgag ctgcctgcct
180
cacgcccatg cattgaaccc taatgagatc cagcgggccc tggtgcagtg caaggaacag
240
gacaacctga tgttggagaa ggcctgcatg gcagtggaag aggcagctaa gggtgggggc
300
gtgtaccctg aagtgttgtt tgaggttgct caccagtggt ctggctata tgagcaaact
360
gcaggtggct catccacagc ccgtgaaggg gctacaagct gtagtgccag tgggatcagg
420
gcaggtgggg aagctgggcg gggtatgcct gagggtagag ggggcccagg gactgagccg
480
gttacagtgg cagcggcagc agtgacagca gcagccacag tggtgcccgt catatcggtg
540
gggtctagtt tatacccggg tccaggactg gggcatggcc actcccctgg cctgcacccc
600
tacactgctc tacagcccca cctgccctgt agccctcagt atctcactca cccagctcac
660
cctgcccacc ccatgcctca catgccccgg cctgccgtct tccctgtgcc cagctctgca
720
tacccacagg gtgtgcatcc tgcattccta ggggctcagt acccttattc agtgactcct
780
ccctcacttg ctgccactgc tgtgtctttc cccgttcctt ccatggcacc catcacagta
840
catccctacc acacagagcc agggcttcca ctgcccacca gtgtggcctg tgagttgtgg
900
ggccagggaa cagtgagcag tgtccatcca gcatccacgt ttccagccat ccaaggtgcc
960
tcactgcctg ccctgaccac acagcccagc cctctggtga gcggaggttt tccaccgccc
1020
gaggaggaga cacacagtca gccagtcaat ccccacagcc tgcaccacct gcatgctgcc
1080
taccgtgtcg gaatgctggc actggagatg ctgggtcgcc gggcacacaa cgatcacccc
1140
aacaacttct cccgctcccc cccctacact gatgatgtca aatggttgct ggggctggca
1200
gcaaagctgg gagtgaacta cgtgcaccag ttctgtgtgg gggcagccaa gggggtgctg
1260
agcccgtttg tgctgcagga gatcgtcatg gagacgctgc agcggctgag tcccgctcat
1320
gcccacaacc acctgcgtgc cccggccttc caccaactgg tgcagcgctg ccagcaggca
1380
tacatgcagt acatccacca ccgcttgatt cacctgactc ctgcggacta cgacgacttt
1440
gtgaatgcga tccggagtgc ccgcagcgcc ttctgcctga cgcccatggg catgatgcag
1500

5304

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ttcaacgaca tcctacagaa cctcaagcgc agcaaacaga ccaaggagct gtggcagcgg
1560
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<210> 6128
<211> 530
<212> PRT
<213> Homo sapiens

<400> 6128

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Thr	Ile	Leu	Val	Glu	Cys	Trp	Asp	Gly	His	Leu	Thr	Pro	Pro	Glu	Val
			20					25					30		
Ala	Ser	Leu	Ala	Asp	Arg	Ala	Ser	Arg	Ala	Arg	Asp	Ser	Asn	Met	Val
			35					40					45		
Arg	Ala	Ala	Ala	Glu	Leu	Ala	Leu	Ser	Cys	Leu	Pro	His	Ala	His	Ala
	50					55					60				
Leu	Asn	Pro	Asn	Glu	Ile	Gln	Arg	Ala	Leu	Val	Gln	Cys	Lys	Glu	Gln
65					70					75					80
Asp	Asn	Leu	Met	Leu	Glu	Lys	Ala	Cys	Met	Ala	Val	Glu	Glu	Ala	Ala
				85					90					95	
Lys	Gly	Gly	Gly	Val	Tyr	Pro	Glu	Val	Leu	Phe	Glu	Val	Ala	His	Gln
			100					105					110		
Trp	Phe	Trp	Leu	Tyr	Glu	Gln	Thr	Ala	Gly	Gly	Ser	Ser	Thr	Ala	Arg
			115					120					125		
Glu	Gly	Ala	Thr	Ser	Cys	Ser	Ala	Ser	Gly	Ile	Arg	Ala	Gly	Gly	Glu
		130					135					140			
Ala	Gly	Arg	Gly	Met	Pro	Glu	Gly	Arg	Gly	Gly	Pro	Gly	Thr	Glu	Pro
145					150					155					160
Val	Thr	Val	Ala	Ala	Ala	Ala	Val	Thr	Ala	Ala	Thr	Val	Val	Pro	
				165					170					175	
Val	Ile	Ser	Val	Gly	Ser	Ser	Leu	Tyr	Pro	Gly	Pro	Gly	Leu	Gly	His
			180					185					190		
Gly	His	Ser	Pro	Gly	Leu	His	Pro	Tyr	Thr	Ala	Leu	Gln	Pro	His	Leu
		195					200					205			
Pro	Cys	Ser	Pro	Gln	Tyr	Leu	Thr	His	Pro	Ala	His	Pro	Ala	His	Pro
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Met	Pro	His	Met	Pro	Arg	Pro	Ala	Val	Phe	Pro	Val	Pro	Ser	Ser	Ala
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Tyr	Pro	Gln	Gly	Val	His	Pro	Ala	Phe	Leu	Gly	Ala	Gln	Tyr	Pro	Tyr
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Ser	Val	Thr	Pro	Pro	Ser	Leu	Ala	Ala	Thr	Ala	Val	Ser	Phe	Pro	Val
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                260                    265                    270
Pro Ser Met Ala Pro Ile Thr Val His Pro Tyr His Thr Glu Pro Gly
        275                    280                    285
Leu Pro Leu Pro Thr Ser Val Ala Cys Glu Leu Trp Gly Gln Gly Thr
    290                    295                    300
Val Ser Ser Val His Pro Ala Ser Thr Phe Pro Ala Ile Gln Gly Ala
305                    310                    315                    320
Ser Leu Pro Ala Leu Thr Thr Gln Pro Ser Pro Leu Val Ser Gly Gly
                325                    330                    335
Phe Pro Pro Pro Glu Glu Glu Thr His Ser Gln Pro Val Asn Pro His
                340                    345                    350
Ser Leu His His Leu His Ala Ala Tyr Arg Val Gly Met Leu Ala Leu
        355                    360                    365
Glu Met Leu Gly Arg Arg Ala His Asn Asp His Pro Asn Asn Phe Ser
    370                    375                    380
Arg Ser Pro Pro Tyr Thr Asp Asp Val Lys Trp Leu Leu Gly Leu Ala
385                    390                    395                    400
Ala Lys Leu Gly Val Asn Tyr Val His Gln Phe Cys Val Gly Ala Ala
                405                    410                    415
Lys Gly Val Leu Ser Pro Phe Val Leu Gln Glu Ile Val Met Glu Thr
                420                    425                    430
Leu Gln Arg Leu Ser Pro Ala His Ala His Asn His Leu Arg Ala Pro
        435                    440                    445
Ala Phe His Gln Leu Val Gln Arg Cys Gln Gln Ala Tyr Met Gln Tyr
    450                    455                    460
Ile His His Arg Leu Ile His Leu Thr Pro Ala Asp Tyr Asp Asp Phe
465                    470                    475                    480
Val Asn Ala Ile Arg Ser Ala Arg Ser Ala Phe Cys Leu Thr Pro Met
                485                    490                    495
Gly Met Met Gln Phe Asn Asp Ile Leu Gln Asn Leu Lys Arg Ser Lys
                500                    505                    510
Gln Thr Lys Glu Leu Trp Gln Arg Val Ser Leu Glu Met Ala Thr Phe
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Ser Pro
    530
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<210> 6129
<211> 2012
<212> DNA
<213> Homo sapiens
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180
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240
gcggaaggag cagaggaccg gcagccggcg tcgaggcggg gcgcgggaac gacggcggcc
300
atggcggcct cggggcccgg gtgtcgcagc tggtgcttgt gtcccgaggt gccatccgcc
360
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accttcttca ctgcgctgct ctcgctgctg gtttccgggc ctcgcctgtt cctgctgcag
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480
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540
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720
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1080
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2012

<210> 6130
<211> 364
<212> PRT
<213> Homo sapiens

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            20                  25                  30
Gly Pro Arg Leu Phe Leu Leu Gln Gln Pro Leu Ala Pro Ser Gly Leu
            35                  40                  45
Thr Leu Lys Ser Glu Ala Leu Arg Asn Trp Gln Val Tyr Arg Leu Val
        50                  55                  60
Thr Tyr Ile Phe Val Tyr Glu Asn Pro Ile Ser Leu Leu Cys Gly Ala
65                  70                  75                  80
Ile Ile Ile Trp Arg Phe Ala Gly Asn Phe Glu Arg Thr Val Gly Thr
                85                  90                  95
Val Arg His Cys Phe Phe Thr Val Ile Phe Ala Ile Phe Ser Ala Ile
            100                 105                 110
Ile Phe Leu Ser Phe Glu Ala Val Ser Ser Leu Ser Lys Leu Gly Glu
            115                 120                 125
Val Glu Asp Ala Arg Gly Phe Thr Pro Val Ala Phe Ala Met Leu Gly
        130                 135                 140
Val Thr Thr Val Arg Ser Arg Met Arg Arg Ala Leu Val Phe Gly Met
145                 150                 155                 160
Val Val Pro Ser Val Leu Val Pro Trp Leu Leu Leu Gly Ala Ser Trp
                165                 170                 175
Leu Ile Pro Gln Thr Ser Phe Leu Ser Asn Val Cys Gly Leu Ser Ile
            180                 185                 190
Gly Leu Ala Tyr Gly Leu Thr Tyr Cys Tyr Ser Ile Asp Leu Ser Glu
            195                 200                 205
Arg Val Ala Leu Lys Leu Asp Gln Thr Phe Pro Phe Ser Leu Met Arg
    210                 215                 220
Arg Ile Ser Val Phe Lys Tyr Val Ser Gly Ser Ser Ala Glu Arg Arg
225                 230                 235                 240
Ala Ala Gln Ser Arg Lys Leu Asn Pro Val Pro Gly Ser Tyr Pro Thr
                245                 250                 255
Gln Ser Cys His Pro His Leu Ser Pro Ser His Pro Val Ser Gln Thr
                260                 265                 270
Gln His Ala Ser Gly Gln Lys Leu Ala Ser Trp Pro Ser Cys Thr Pro
        275                 280                 285
Gly His Met Pro Thr Leu Pro Pro Tyr Gln Pro Ala Ser Gly Leu Cys
        290                 295                 300
Tyr Val Gln Asn His Phe Gly Pro Asn Pro Thr Ser Ser Ser Val Tyr
305                 310                 315                 320
Pro Ala Ser Ala Gly Thr Ser Leu Gly Ile Gln Pro Pro Thr Pro Val
                325                 330                 335
Asn Ser Pro Gly Thr Val Tyr Ser Gly Ala Leu Gly Thr Pro Gly Ala
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Ala Gly Ser Lys Glu Ser Ser Arg Val Pro Met Pro
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355   360

<210> 6131
<211> 3526
<212> DNA
<213> Homo sapiens

<400> 6131
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120
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180
gggcccctc cacagatccg catcctcaag aggcccacca gcaacggtgt ggtcagcagc
240
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2940
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3000
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3526


<210> 6132
<211> 167
<212> PRT
<213> Homo sapiens

<400> 6132
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            20                  25                  30
Leu Lys Ile Thr Gln Lys Glu Ser Arg Lys Ser Lys Ser Pro Pro Lys
        35                  40                  45
Val Pro Ile Val Ile Gln Asp Asp Ser Leu Pro Ala Gly Pro Pro Pro
    50                  55                  60
Gln Ile Arg Ile Leu Lys Arg Pro Thr Ser Asn Gly Val Val Ser Ser
65                  70                  75                  80
Pro Asn Ser Thr Ser Arg Pro Thr Leu Pro Val Lys Ser Leu Ala Gln
                85                  90                  95
Arg Glu Ala Glu Tyr Ala Glu Ala Arg Lys Arg Ile Leu Gly Ser Ala
            100                 105                 110
Ser Pro Glu Glu Glu Gln Glu Lys Pro Ile Leu Asp Arg Ser Ser Ser
        115                 120                 125
Asp Leu Leu Pro Phe Arg Pro Thr Arg Ile Ser Gln Pro Glu Asp Ser
    130                 135                 140
Arg Gln Pro Asn Asn Val Ile Arg Gln Pro Leu Gly Pro Asp Gly Ser
145                 150                 155                 160
His Gly Phe Lys Gln Arg Arg
                165


<210> 6133
<211> 4156
<212> DNA
<213> Homo sapiens

<400> 6133
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1620
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2940
gtcatcagca aagagaaaaa gcacaggtta gctccccatt agatggaaaa gtgtagggac
3000
tgagaagggc tgcagcctca gcagtgtaca gagtccccgg cgctctgagg ttggagagaa
3060
agaacagacc agcgcccttc ctgactacat ccgaaacttc acacagggtg tttctgagca
3120
ccagcacttc cagcgcttca cttaacggca taaagcaaaa caggaccttg gcacaccgtc
3180
agctcgaact caacactggc agccaccgtc tcacccctgc ggaggagcgc tcccgtctcc
3240
```

```
cacaggtgcc ttaccgcgtt ccctcccgct gctttcattt ttctgaccta ataattacgg
3300
gaaatggaaa gtctgggcca gcatcaataa aatgacacca aaaataagta gatgaaatca
3360
aatgaatatg agaacatctt gttcttcaat atcacgggtt tttgttaatg tttcataagt
3420
aattctcccc acttgatttt tcttctataa aatcccatag aacaatgttt atgctatagc
3480
catttaatat atgtacaaat tgtaaagaat atgtataaat gttttacacg aatgtaagag
3540
catgtagaag ccaacatata aataaattgt ttaaaaaaac tgtacagtaa attctcaaag
3600
cactttttca aaacactttt tggactttgt gtgtgatttt tgttgttgtt gttaagtact
3660
ttttattcca gctgctgaaa atggtccagg taatgaattc ttccccaaat cctatttctt
3720
ctgacatgaa ttcatcattt cagttccgta ggtcagtgtt gcggtccggg aagcgtatca
3780
taaccacctg ggagttgcca agaagcagac agtctcccag tgtctgactc tcggatattt
3840
ggatttgact ggtgtgaggc aaagtgaaaa agggatgggg gaaatggaga tggcacgggc
3900
tcctcagagc gtggtagccg actgtgagga aaagcagagg gaatgtgaaa gaaaataaga
3960
gaatccacgg gatttgatgc ctggaagatt ctccttcaag tggcaacatg gcatatatat
4020
ccttctccgg ggagtcacat gcaccatttg gttcttagat acgttgatgt tttgattttt
4080
aatgatttgt atcaacctgt aggtaccaca gaagagctgt agtcatacaa tcacataact
4140
tttacaaata tagtgg
4156
```

```
<210> 6134
<211> 595
<212> PRT
<213> Homo sapiens

<400> 6134
Met Ala Thr Lys Ala Arg Val Met Tyr Asp Phe Ala Ala Glu Pro Gly
1               5                   10                  15
Asn Asn Glu Leu Thr Val Asn Glu Gly Glu Ile Ile Thr Ile Thr Asn
            20                  25                  30
Pro Asp Val Gly Gly Gly Trp Leu Glu Gly Arg Asn Ile Lys Gly Glu
        35                  40                  45
Arg Gly Leu Val Pro Thr Asp Tyr Val Glu Ile Leu Pro Ser Asp Gly
    50                  55                  60
Lys Asp Gln Phe Ser Cys Gly Asn Ser Val Ala Asp Gln Ala Phe Leu
65                  70                  75                  80
Asp Ser Leu Ser Ala Ser Thr Ala Gln Ala Ser Ser Ser Ala Ala Ser
                85                  90                  95
Asn Asn His Gln Val Gly Ser Gly Asn Asp Pro Trp Ser Ala Trp Ser
                100                 105                 110
Ala Ser Lys Ser Gly Asn Trp Glu Ser Ser Glu Gly Trp Gly Ala Gln
```

```
          115                  120                  125
Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp
    130                  135                  140
Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly
145                  150                  155                  160
Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser
                165                  170                  175
Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly
                180                  185                  190
Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe
        195                  200                  205
Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln
    210                  215                  220
Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly
225                  230                  235                  240
Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp
                245                  250                  255
Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr
                260                  265                  270
Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys
            275                  280                  285
His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala
        290                  295                  300
Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu
305                  310                  315                  320
Glu Glu Phe Ile Lys Met Arg Met Glu Arg Leu Gln Ala Trp Met Thr
                325                  330                  335
Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln
            340                  345                  350
Phe Leu Asn Phe Arg Asp Glu Lys Glu Trp Lys Thr Gly Lys Arg Lys
        355                  360                  365
Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu
        370                  375                  380
Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu
385                  390                  395                  400
Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu
                405                  410                  415
Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro
                420                  425                  430
Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val
            435                  440                  445
Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile
    450                  455                  460
Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu
465                  470                  475                  480
Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr
                485                  490                  495
Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly
            500                  505                  510
Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys
        515                  520                  525
Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met
    530                  535                  540
Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile
```

```
545                    550                555                560
Tyr Asp Tyr Asn Ser Val Ile Arg Leu Tyr Leu Glu Gln Gln Val Gln
                    565                570                575
Phe Tyr Glu Thr Ile Ala Glu Lys Leu Arg Gln Ala Leu Ser Arg Phe
                580                585                590
Pro Val Met
        595
```

```
<210> 6135
<211> 526
<212> DNA
<213> Homo sapiens
```

```
<400> 6135
tcgacgtccc tccttctgag ccatcagcaa ctaggcgact acaggaaact tactccaaat
60
tgctactaga aaagaccttg cttgaagagc catctcatca acatgttacg caggaaacac
120
aggccaaacc agggtatcag ccatctggag aatctgacaa agaaaacaaa gtacaggaac
180
gtcccccaag tgcgtcttcc agtagtgaca tgtctctctc agaacctcca cagcctcttg
240
caagaaaaga cttgatggaa tctacatgga tgcagcctga aagattgagc ccacaagttc
300
accattctca accacagcct tttgctggaa cagctggaag tttactctcc catctcttga
360
gtttagagca tgtaggaatt ttgcataagg attttgaatc tattttacca accaggaaga
420
atcataatat ggcttcaagg ccattaactt ttacacctca accatatgtg acctcaccag
480
ctgcttatac agatgccttg gtaaaaccta gtgccagcca atataa
526
```

```
<210> 6136
<211> 105
<212> PRT
<213> Homo sapiens
```

```
<400> 6136
Met Ser Leu Ser Glu Pro Pro Gln Pro Leu Ala Arg Lys Asp Leu Met
 1               5                10                15
Glu Ser Thr Trp Met Gln Pro Glu Arg Leu Ser Pro Gln Val His His
            20                25                30
Ser Gln Pro Gln Pro Phe Ala Gly Thr Ala Gly Ser Leu Leu Ser His
        35                40                45
Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
    50                55                60
Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
65                70                75                80
Phe Thr Pro Gln Pro Tyr Val Thr Ser Pro Ala Ala Tyr Thr Asp Ala
                85                90                95
Leu Val Lys Pro Ser Ala Ser Gln Tyr
            100                105
```

<210> 6137
<211> 2073
<212> DNA
<213> Homo sapiens

<400> 6137
ngcggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgctgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctaagt taaagaaagc aagtaaacgc atgacctgcc ataagcggta taaaatccaa
240
aaaaaggttc gagaacatca tcgaaaatta agaaaggagg ctaaaaagca gggtcacaag
300
aagcctagga aagacccagg agttccaaac agtgctccct ttaaggaggc tcttcttagg
360
gaagctgagc taaggaaaca gaggcttgaa gaactaaaac agcagcagaa acttgacagg
420
cagaaggaac tagaaaagaa aagaaaactt gaaactaatc ctgatattaa gnccatcaaa
480
tgtggaaccn ntatggaaaa ggagtttggg ctttgcaaaa ctgagaacaa agccaagtcg
540
ggcaaacaga attcaaagaa gctgtactgc caagaactta aaaaggtgat tgaagcctcc
600
gatgttgtcc tagaggtgtt ggatgccaga gatcctcttg gttgcagatg tcctcaggta
660
gaagaggcca ttgtccagag tggacagaaa aagctggtac ttatattaaa taaatcagat
720
ctggtaccaa aggagaattt ggagagctgg ctaaattatt gaagaaaga attgccaaca
780
gtggtgttca gagcctcaac aaaaccaaag gataaaggga agataaccaa gcgtgtgaag
840
gcaaagaaga atgctgctcc attcagaagt gaagtctgct ttgggaaaga gggcctttgg
900
aaacttcttg gaggttttca ggaaacttgc agcaaagcca ttcgggttgg agtaattggt
960
ttcccaaatg tggggaaaag cagcattatc aatagcttaa aacaagaaca gatgtgtaat
1020
gttggtgtat ccatggggct tacaaggagc atgcaagttg tccccttgga caaacagatc
1080
acaatcatag atagtccgag cttcatcgta tctccactta attcctcctc tgcgcttgct
1140
ctgcgaagtc cagcaagtat tgaagtagta aaaccgatgg aggctgccag tgccatcctt
1200
tcccaggctg atgctcgaca ggtagtactg aaatatactg tccaggctca caggaattct
1260
ctggaatttt ttactgtgct tgctcagaga agaggtatgc accaaaaagg tggaatccca
1320
aatgttgaag gtgctgccaa actgctgtgg tctgagtgga caggtgcctc attagcttac
1380
tattgccatc cccctacatc ttggactcct cctccatatt ttaatgagag tattgtggta
1440

gacatgaaaa gcggcttcaa tctggaagaa ctggaaaaga acaatgcaca gagcataaga
1500
gccatcaagg gccctcattt ggccaatagc atccttttcc agtcttccgg tctgacaaat
1560
ggaataatag aagaaaagga catacatgaa gaattgccaa aacggaaaga aaggaagcag
1620
gaggagaggg aggatgacaa agacagtgac caggaaactg ttgatgaaga agttgatgaa
1680
aacagctcag gcatgtttgc tgcagaagag acaggggagg cactgtctga ggagactaca
1740
gcaggtgaac agtctacaag gtcttttatc ttggataaaa tcattgaaga ggatgatgct
1800
tatgacttca gtacagatta tgtgtaacag aacaatggct ttttatgatt ttttttttta
1860
acattttaag cagactgcta aactgttctc tgtataagtt atggtatgca tgagctgtgt
1920
aaattttgtg aatatgtatt atattaaaac caggcaactt ggaatcccta aattctgtaa
1980
aaagacaatt catctcattg tgagtggaag tagttatctg gaataaaaaa agaagatacc
2040
tattgaaaaa aaaaaaaaaa aaaaaaaaa aaa
2073

<210> 6138
<211> 550
<212> PRT
<213> Homo sapiens

<400> 6138
Met Lys Arg Pro Lys Leu Lys Lys Ala Ser Lys Arg Met Thr Cys His
1   5   10   15
Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys Leu
            20   25   30
Arg Lys Glu Ala Lys Lys Gln Gly His Lys Lys Pro Arg Lys Asp Pro
        35   40   45
Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Arg Glu Ala
    50   55   60
Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys Leu
65   70   75   80
Asp Arg Gln Lys Glu Leu Glu Lys Lys Arg Lys Leu Glu Thr Asn Pro
                85   90   95
Asp Ile Lys Xaa Ile Lys Cys Gly Thr Xaa Met Glu Lys Glu Phe Gly
            100   105   110
Leu Cys Lys Thr Glu Asn Lys Ala Lys Ser Gly Lys Gln Asn Ser Lys
        115   120   125
Lys Leu Tyr Cys Gln Glu Leu Lys Lys Val Ile Glu Ala Ser Asp Val
    130   135   140
Val Leu Glu Val Leu Asp Ala Arg Asp Pro Leu Gly Cys Arg Cys Pro
145   150   155   160
Gln Val Glu Glu Ala Ile Val Gln Ser Gly Gln Lys Lys Leu Val Leu
                165   170   175
Ile Leu Asn Lys Ser Asp Leu Val Pro Lys Glu Asn Leu Glu Ser Trp
            180   185   190
Leu Asn Tyr Leu Lys Lys Glu Leu Pro Thr Val Val Phe Arg Ala Ser

```
            195                    200                    205
Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys
       210                    215                    220
Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly
225                    230                    235                    240
Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile
                245                    250                    255
Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile
                260                    265                    270
Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly
                275                    280                    285
Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile
       290                    295                    300
Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala
305                    310                    315                    320
Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu
                325                    330                    335
Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu
                340                    345                    350
Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val
                355                    360                    365
Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val
       370                    375                    380
Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu
385                    390                    395                    400
Ala Tyr Tyr Cys His Pro Pro Thr Ser Trp Thr Pro Pro Pro Tyr Phe
                405                    410                    415
Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu
                420                    425                    430
Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His
       435                    440                    445
Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile
       450                    455                    460
Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg
465                    470                    475                    480
Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val
                485                    490                    495
Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu
                500                    505                    510
Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr
       515                    520                    525
Arg Ser Phe Ile Leu Asp Lys Ile Ile Glu Glu Asp Asp Ala Tyr Asp
       530                    535                    540
Phe Ser Thr Asp Tyr Val
545                    550
```

```
<210> 6139
<211> 2249
<212> DNA
<213> Homo sapiens

<400> 6139
nncggccgca ggggccggcg ctgtcgcagc ccgtccgcct cgctcatggt acgggcgcca
60
```

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gcctcacccg cagaaaccac ctcacactga gcggcgccgg ctcagactcc acaggtcgtc
120
acagacgatg atggccaggc cccggaggct aaggacggca gctcctttag cggcagagtt
180
ttccgagtga ccttcttgat gctggctgtt tctctcaccg ttcccctgct tggagccatg
240
atgctgctgg aatctcctat agatccacag cctctcagct tcaaagaacc cccgctcttg
300
cttggtgttc tgcatccaaa tacgaagctg cgacaggcag aaaggctgtt tgaaaatcaa
360
cttgttggac cggagtccat agcacatatt ggggatgtga tgtttactgg gacagcagat
420
ggccgggtcg taaaacttga aaatggtgaa atagagacca ttgcccggtt tnggttcggg
480
cccnnttgca aaacccgaga tgatgagcct gtgtgtggga gacccctggg tatccgtgca
540
gggcccaatg ggactctctt tgtggccgat gcatacaagg gactatttga agtaaatccc
600
tggaaacgtg aagtgaaact gctgctgtcc tccgagacac ccattgaggg gaagaacatg
660
tcctttgtga atgatcttac agtcactcag gatgggagga agatttattt caccgattct
720
agcagcaaat ggcaaagacg agactacctg cttctggtga tggagggcac agatgacggg
780
cgcctgctgg agtatgatac tgtgaccagg gaagtaaaag ttttattgga ccagctgcgg
840
ttcccgaatg gagtccagct gtctcctgca gaagactttg tcctggtggc agaaacaacc
900
atggccagga tacgaagagt ctacgtttct ggcctgatga agggcggggc tgatctgttt
960
gtggagaaca tgcctggatt tccagacaac atccggccca gcagctctgg ggggtactgg
1020
gtgggcatgt cgaccatccg ccctaaccct gggttttcca tgctggattt cttatctgag
1080
agaccctggga ttaaaaggat gattttttaag ggaagctgcg ctggttgtga tctgctcttt
1140
agtcaagaga cggtgatgaa gtttgtgccg cggtacagcc tcgtcctaga actcagcgac
1200
agcggtgcct tccggagaag cctgcatgat cccgatgggc tggtggccac ctacatcagc
1260
gaggtgcacg aacacgatgg gcacctgtac ctgggctctt tcaggtcccc cttcctctgc
1320
agactcagcc tccaggctgt ttagccctcc cagatagctg cccctgccac gcaggccagg
1380
agtcttcaca ctcaggcacc aggcctggtc caggaggagc tgtggacaca gtcgtggttc
1440
aagtgtccac atgcacctgt tagtccctga gaggtggtgg aatggctgc ttcattcctc
1500
gaggatgccc gggcccacc tgggcttgtc tttctgttta gagggaagtg taacatatct
1560
gccatgagga acataaattc atgtaaagcc attttctctt aaacaaaaca aaactttcta
1620
agtacagtca ttctctagga tttgggaagc tccttgcact tggaacaggg ctcaggtggg
1680
```

tggagcagta aggcactacc cagagagctt gctgctgcgg ccctgtcctg cggcctcaaa
1740 -
gttcttcttt actatatata acgtgcggtc atacctttct tcgttgtggt ggggatggaa
1800
gagcagaggg agcatggccc aggggtgttg aggccagcgg tgagagccgt gttagccaag
1860
acatggaact gtgttctcaa gggttatgtg gggcgtgggc tctccatagt gtgtatgaaa
1920
agcttgttga ctctagcggc tcagagagga ctttgctggg tttctttctg tgaatatctc
1980
cgtgctgacc atgctggaat tggatgattc tgcaattcgg gacctactgc aggggtccgt
2040
ttagtaacgt cttgtctgtg atctttgttc ttgacctcta gaccccaaga tgtgaacagt
2100
gcacgtgtta atgtcatctt tgctcatgtg ttataagccc caagttgctg tatattttca
2160
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2220
tgattaacct ttaaaaaaaa aaaaaaaaa
2249

<210> 6140
<211> 381
<212> PRT
<213> Homo sapiens

<400> 6140
Met Leu Ala Val Ser Leu Thr Val Pro Leu Leu Gly Ala Met Met Leu
1   5   10   15
Leu Glu Ser Pro Ile Asp Pro Gln Pro Leu Ser Phe Lys Glu Pro Pro
            20   25   30
Leu Leu Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu
        35   40   45
Arg Leu Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile
    50   55   60
Gly Asp Val Met Phe Thr Gly Thr Ala Asp Gly Arg Val Val Lys Leu
65   70   75   80
Glu Asn Gly Glu Ile Glu Thr Ile Ala Arg Phe Xaa Phe Gly Pro Xaa
                85   90   95
Cys Lys Thr Arg Asp Asp Glu Pro Val Cys Gly Arg Pro Leu Gly Ile
            100   105   110
Arg Ala Gly Pro Asn Gly Thr Leu Phe Val Ala Asp Ala Tyr Lys Gly
        115   120   125
Leu Phe Glu Val Asn Pro Trp Lys Arg Glu Val Lys Leu Leu Leu Ser
        130   135   140
Ser Glu Thr Pro Ile Glu Gly Lys Asn Met Ser Phe Val Asn Asp Leu
145   150   155   160
Thr Val Thr Gln Asp Gly Arg Lys Ile Tyr Phe Thr Asp Ser Ser Ser
                165   170   175
Lys Trp Gln Arg Arg Asp Tyr Leu Leu Leu Val Met Glu Gly Thr Asp
                180   185   190
Asp Gly Arg Leu Leu Glu Tyr Asp Thr Val Thr Arg Glu Val Lys Val
            195   200   205
Leu Leu Asp Gln Leu Arg Phe Pro Asn Gly Val Gln Leu Ser Pro Ala

5321

```
      210                      215                      220
Glu Asp Phe Val Leu Val Ala Glu Thr Thr Met Ala Arg Ile Arg Arg
225                      230                      235                      240
Val Tyr Val Ser Gly Leu Met Lys Gly Gly Ala Asp Leu Phe Val Glu
                    245                      250                      255
Asn Met Pro Gly Phe Pro Asp Asn Ile Arg Pro Ser Ser Ser Gly Gly
                    260                      265                      270
Tyr Trp Val Gly Met Ser Thr Ile Arg Pro Asn Pro Gly Phe Ser Met
                    275                      280                      285
Leu Asp Phe Leu Ser Glu Arg Pro Trp Ile Lys Arg Met Ile Phe Lys
               290                      295                      300
Gly Ser Cys Ala Gly Cys Asp Leu Leu Phe Ser Gln Glu Thr Val Met
305                      310                      315                      320
Lys Phe Val Pro Arg Tyr Ser Leu Val Leu Glu Leu Ser Asp Ser Gly
                    325                      330                      335
Ala Phe Arg Arg Ser Leu His Asp Pro Asp Gly Leu Val Ala Thr Tyr
               340                      345                      350
Ile Ser Glu Val His Glu His Asp Gly His Leu Tyr Leu Gly Ser Phe
          355                      360                      365
Arg Ser Pro Phe Leu Cys Arg Leu Ser Leu Gln Ala Val
     370                      375                      380
```

```
<210> 6141
<211> 5651
<212> DNA
<213> Homo sapiens

<400> 6141
cttcgccacc tctctagcct gggcaactgg gggcgccccg gacgaccatg agagataagg
60
actgagggcc aggaagggga agcgagcccg ccgagaggtg gcggggactg ctcacgccaa
120
gggccacagc ggccgcgctc cggcctcgct ccgccgctcc acgcctcgcg ggatccgcgg
180
gggcagcccg gccgggcggg gatgccgggg ctggggcgga gggcgcagtg gctgtgctgg
240
tggtgggggc tgctgtgcag ctgctgcggg cccccgccgc tgcggccgcc cttgcccgct
300
gccgcggccg ccgccgccgg ggggcagctg ctggggacg gcgggagccc cggccgcacg
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420
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480
cggcccctgc acggcctcca acagccgcag cccccggcgc tccggcagca ggaggagcag
540
cagcagcagc agcagctgcc tcgcggagag cccccctcccg ggcgactgaa gtccgcgccc
600
ctcttcatgc tggatctgta caacgccctg tccgccgaca cgacgaggagca cggggcgtcg
660
gagggggaga ggcagcagtc ctggccccac gaagcagcca gctcgtccca gcgtcggcag
720
ccgccccccgg gcgccgcgca cccgctcaac cgcaagagcc ttctggcccc cggatctggc
780
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```
agcggcggcg cgtccccact gaccagcgcg caggacagcg ccttcctcaa cgacgcggac
840
atggtcatga gctttgtgaa cctggtggag tacgacaagg agttctcccc tcgtcagcga
900
caccacaaag agttcaagtt caacttatcc cagattcctg agggtggggt ggtgacggct
960
gcagaattcc gcatctacaa ggactgtgtt atggggagtt ttaaaaacca aacttttctt
1020
atcagcattt atcaagtctt acaggagcat cagcacagag actctgacct gtttttgttg
1080
gacacccgtg tagtatgggc ctcagaagaa ggctggctgg aatttgacat cacggccact
1140
agcaatctgt gggttgtgac tccacagcat aacatggggc ttcagctgag cgtggtgaca
1200
agggatggag tccacgtcca cccccgagcc gcaggcctgg tgggcagaga cggcccttac
1260
gataagcagc ccttcatggt ggctttcttc aaagtgagtg aggtccacgt gcgcaccacc
1320
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1380
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1440
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1560
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1680
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1740
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1800
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1980
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2160
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2340
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2400
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ctttgctagt accaaaagta gactgattac actgaggtga ggctacaagg ggtgtgtaac
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2520
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2580
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2640
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2700
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2760
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2820
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2880
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4020
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4200
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4320
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4560
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4680
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4740
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5100
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5340
cagtgtctgc agcatccagt tttccagtgt ctggaagtcc cgaggaccct ggtacttcac
5400
agcttcttgg cctggcttga aaagctttaa ggtggggtat cctcgcaccc cctgggcgga
5460
gcacacgtcg gagtgggccg tgcagtccac tttagccaca tagactttgg catcttccat
5520
gctgttgtat ttgtctccca ggtcattcca agtcggctgc agccgctggc agtgtccaca
5580
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5640
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5651

<210> 6142
<211> 513
<212> PRT
<213> Homo sapiens

<400> 6142
Met Pro Gly Leu Gly Arg Arg Ala Gln Trp Leu Cys Trp Trp Trp Gly
 1   5   10   15
Leu Leu Cys Ser Cys Cys Gly Pro Pro Pro Leu Arg Pro Pro Leu Pro
                20   25   30
Ala Ala Ala Ala Ala Ala Ala Gly Gly Gln Leu Leu Gly Asp Gly Gly
            35   40   45
Ser Pro Gly Arg Thr Glu Gln Pro Pro Pro Ser Pro Gln Ser Ser Ser
    50   55   60
Gly Phe Leu Tyr Arg Arg Leu Lys Thr Gln Glu Lys Arg Glu Met Gln
65   70   75   80
Lys Glu Ile Leu Ser Val Leu Gly Leu Pro His Arg Pro Arg Pro Leu
                85   90   95
His Gly Leu Gln Gln Pro Gln Pro Pro Ala Leu Arg Gln Gln Glu Glu
            100   105   110
Gln Gln Gln Gln Gln Gln Leu Pro Arg Gly Glu Pro Pro Pro Gly Arg
        115   120   125
Leu Lys Ser Ala Pro Leu Phe Met Leu Asp Leu Tyr Asn Ala Leu Ser
    130   135   140
Ala Asp Asn Asp Glu Asp Gly Ala Ser Glu Gly Glu Arg Gln Gln Ser
145   150   155   160
Trp Pro His Glu Ala Ala Ser Ser Ser Gln Arg Arg Gln Pro Pro Pro
                165   170   175
Gly Ala Ala His Pro Leu Asn Arg Lys Ser Leu Leu Ala Pro Gly Ser
            180   185   190
Gly Ser Gly Gly Ala Ser Pro Leu Thr Ser Ala Gln Asp Ser Ala Phe
        195   200   205
Leu Asn Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu Tyr
    210   215   220
Asp Lys Glu Phe Ser Pro Arg Gln Arg His His Lys Glu Phe Lys Phe
225   230   235   240
Asn Leu Ser Gln Ile Pro Glu Gly Gly Val Val Thr Ala Ala Glu Phe
                245   250   255
Arg Ile Tyr Lys Asp Cys Val Met Gly Ser Phe Lys Asn Gln Thr Phe
            260   265   270
Leu Ile Ser Ile Tyr Gln Val Leu Gln Glu His Gln His Arg Asp Ser
    275   280   285
Asp Leu Phe Leu Leu Asp Thr Arg Val Val Trp Ala Ser Glu Glu Gly
    290   295   300
Trp Leu Glu Phe Asp Ile Thr Ala Thr Ser Asn Leu Trp Val Val Thr
305   310   315   320
Pro Gln His Asn Met Gly Leu Gln Leu Ser Val Val Thr Arg Asp Gly
                325   330   335
Val His Val His Pro Arg Ala Ala Gly Leu Val Gly Arg Asp Gly Pro
            340   345   350
Tyr Asp Lys Gln Pro Phe Met Val Ala Phe Phe Lys Val Ser Glu Val

```
        355                360                365
His Val Arg Thr Thr Arg Ser Ala Ser Ser Arg Arg Arg Gln Gln Ser
    370                375                380
Arg Asn Arg Ser Thr Gln Ser Gln Asp Val Ala Arg Val Ser Ser Ala
385                390                395                400
Ser Asp Tyr Asn Ser Ser Glu Leu Lys Thr Ala Cys Arg Lys His Glu
                405                410                415
Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala
            420                425                430
Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys Ser Phe Pro
        435                440                445
Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu
    450                455                460
Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys Cys Ala Pro
465                470                475                480
Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asn Asp Asn Ser Lys
                485                490                495
Ile Thr Leu Lys Lys Tyr Arg Asn Met Val Val Arg Ala Cys Gly Tyr
            500                505                510
Cys
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<210> 6143
<211> 1137
<212> DNA
<213> Homo sapiens
```

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<400> 6143
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60
ctcaccctcc accccagggt cctccctctc tggaactcag gcagcagaca agcttgggtc
120
cacccacctg cccaacctag gacagctggg cctgagctgg gcgggcaggg gattccatct
180
cctgggtgcg cctgccagag gggagaggct ggaggcggcg ggaatgctgt tctcccccag
240
gagtcagtcc tcagggcttc tgccgtggga cgtggggccg agggacctgg ggcactgacc
300
aggtcggggt cgggggcagc atctgcattg gtgaggccgg gtgaaaaggg ctgctggtgc
360
cggacagctt ctggtgctgg gcctagcgga gacagaggac cagaggtcca ggttcctggg
420
ggctgagctt ttctcagact tcggaggaaa aatgtcccag cccagcaggc agtgccgggg
480
cagggccagt gtgtcagagg cgtcaaagct ctttcgggtg gatgtggtac cggtgcgggg
540
gctccaggat cgacagcggg atgctcaccc tgcgcagggg ggctgacgtg cgctgctgcg
600
ccagggtccc agggccctgc tggtctcgcg atgtcctgca caggcggcag ggggtaccgg
660
gatccacagg caccgggaac aggcgccggt tgacacggta acagtacacg cattcatggt
720
cttcctccac gccgctgcca ctgctctcac gcaggcctgg caactggggt tcaggatggc
780
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tgcagataca ctcctccttg ttggtttccc gaaactcctg cagcttggag aagaaggcct
840
caggctggct ggtgatggaa gagctggtgt ccagagaccc tgcaatccag tcatagccca
900
ggtatggcct gaggcgccag ctcctctcag gaactgcaga ctcctcagag aaggtcaccc
960
tgggcttgga cagcttgctc tgttgagcca ggatggacct cggggtctgt gcctcctggg
1020
gtcctggatc acccagcctc cctgagggct ctgggtccct caggcttgag gtgcccagcg
1080
agggtgctga gtggggtctc ggtcggccca gggactcctg gtgctggcat ttggcag
1137

<210> 6144
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6144
Phe Phe Phe Phe Phe Glu Leu Gln Ser Thr Glu Leu Tyr Leu Gln Thr
 1   5   10   15
Ser Thr Glu Ser Leu Thr Leu His Pro Arg Val Leu Pro Leu Trp Asn
            20   25   30
Ser Gly Ser Arg Gln Ala Trp Val His Pro Pro Ala Gln Pro Arg Thr
        35   40   45
Ala Gly Pro Glu Leu Gly Gly Gln Gly Ile Pro Ser Pro Gly Cys Ala
    50   55   60
Cys Gln Arg Gly Glu Ala Gly Gly Gly Asn Ala Val Leu Pro Gln
65   70   75   80
Glu Ser Val Leu Arg Ala Ser Ala Val Gly Arg Gly Ala Glu Gly Pro
                85   90   95
Gly Ala Leu Thr Arg Ser Gly Ser Gly Ala Ala Ser Ala Leu Val Arg
            100   105   110
Pro Gly Glu Lys Gly Cys Trp Cys Arg Thr Ala Ser Gly Ala Gly Pro
        115   120   125
Ser Gly Asp Arg Gly Pro Glu Val Gln Val Pro Gly Gly
    130   135   140

<210> 6145
<211> 766
<212> DNA
<213> Homo sapiens

<400> 6145
nacaagggct cagcctcctc tcctggggtc cagcttgtcg cctctggctc acctgttcct
60
agagcaatgt cttcccagca gcagcagcgg caggcagcag tgcccacccc agaggcccag
120
cagcagcaag tgaagcagcc ttgtcagcca ccccctgtta aatgtcaaga gacatgtgca
180
cccaaaacca aggatccatg tgctccccag gtcaagaagc aatgcccacc gaaagacacc
240
atcattccag cccagcagaa gtgtccctca gcccagcaag cctccaagag caaacagaag
300

```
taaggatgga ctggatatta ccatcatcca ccatcctggc taccagatgg aaccttctct
360
tcttccttct cctcttccct ccagctcttg agcctaccct cctctcacat ctcctcctgc
420
ccaagatgta aggaagcatt gtaaggattt cttcccatcg tacccttccc cacacatacc
480
accttggctt cttctatatc ccaccccgat gctctcccag gtgggtgtga gagagacctc
540
attctctgca ggctccagcg tggccacagc taaggcccat ccatttccca aagtgaggaa
600
agtgtctggg cttcttctgg ggttccaccc tgacaagtag ggtcacagag gctggtgcac
660
agtttctgcc tcattcctct ccatgatgcc ccctgctctg ggcttctctc ctgttttccc
720
caataaatat gtgcctcatg taataaatgt gtctgcttcc tgggct
766
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```
<210> 6146
<211> 100
<212> PRT
<213> Homo sapiens
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<400> 6146
Xaa Lys Gly Ser Ala Ser Ser Pro Gly Val Gln Leu Val Ala Ser Gly
1               5                   10                  15
Ser Pro Val Pro Arg Ala Met Ser Ser Gln Gln Gln Gln Arg Gln Ala
            20                  25                  30
Ala Val Pro Thr Pro Glu Ala Gln Gln Gln Gln Val Lys Gln Pro Cys
        35                  40                  45
Gln Pro Pro Pro Val Lys Cys Gln Glu Thr Cys Ala Pro Lys Thr Lys
    50                  55                  60
Asp Pro Cys Ala Pro Gln Val Lys Lys Gln Cys Pro Pro Lys Asp Thr
65                  70                  75                  80
Ile Ile Pro Ala Gln Gln Lys Cys Pro Ser Ala Gln Gln Ala Ser Lys
                85                  90                  95
Ser Lys Gln Lys
            100
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<210> 6147
<211> 1852
<212> DNA
<213> Homo sapiens
```

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<400> 6147
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agttcatatt tacactatca taaaattatg gccgagaagt taaatattct aaatgtgtca
120
acatagttct ctgtaaaact gacttacttt ccaaatatat tttgaaataa aacaatataa
180
aaatgttttc tgtttttagg aatggtggaa agcagcagac ataattggag tgggttggat
240
aagcaaagtg atattcaaaa tttaaatgaa gagagaatct tagctttaca gctttgtggg
300
```

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tggataaaga aaggaacgga tgtagacgtg gggccatttt tgaactccct tgtacaagaa
360
ggggaatggg aaagagctgc tgctgtggca ttgttcaact tggatattcg ccgagcaatc
420
caaatcctga atgaaggggc atcttctgaa aaaggagatc tgaatctcaa tgtggtagca
480
atggctttat cgggttatac ggatgagaag aactcccttt ggagagaaat gtgtagcaca
540
ctgcgattac agctaaataa cccgtatttg tgtgtcatgt ttgcatttct gacaagtgaa
600
acaggatctt acgatggagt tttgtatgaa aacaaagttg cagtacgtga cagagtggca
660
tttgcttgta aattccttag tgatactcag ttaaatagat acatcgaaaa gttgaccaat
720
gaaatgaaag aggctggaaa tttggaagga attttgctta caggccttac taaagatgga
780
gtggacttaa tggagagtta tgttgataga actggagatg ttcaaacagc aagttactgt
840
atgttacagg gttcaccttt agatgttctt aaagatgaaa gggttcagta ctggattgag
900
aattatagaa atttattaga tgcctggagg ttttggcata acgagctga atttgatatt
960
cacaggagta agttggatcc cagttccaag cctttagcac aagttttgt gagttgcaat
1020
ttctgtggca agtcaatctc ctacagctgt tcagctgtgc ctcatcaggg cagaggtttt
1080
agtcagtatg gtgtgagtgg ctcaccaacg aaatctaaag tcacaagttg tcctggctgt
1140
cgaaaaccac ttcctcgatg tgcgctttgt ctcattaata tgggaacacc agtttctagc
1200
tgtcctggag gaaccaaatc agatgaaaaa gtggacttga gcaaggacaa aaaattagcc
1260
caatttaaca actggtttac atggtgtcat aattgcaggc acggtggaca tgctggacat
1320
atgcttagtt ggttcaggga ccatgcagag tgccctgtgt ctgcatgcac gtgtaaatgt
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accaccttaa gagaaccctt caagtgtgga gctttctagt aggtgtcctt catagctcag
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aaacatacct cagaacaagc cattcatgac ttacctgtaa tgggaaaata aatcattcta
1560
tcagatcagc agttttgatg tttgagtgat tttgatatgc ttcacagaga caaatgctgc
1620
caaaataaac atcgaagtat agacatgagt tctgttcagc aggttgaaaa gtctgattta
1680
gaaaacttt ctaagttttg gttgaaatta tgaacactct agaagcagaa tttctggaag
1740
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1852
```

<210> 6148

<211> 410
<212> PRT
<213> Homo sapiens

<400> 6148
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Met Val Glu Ser Ser Arg His Asn Trp Ser Gly Leu Asp Lys Gln Ser
 1               5                   10                  15
Asp Ile Gln Asn Leu Asn Glu Glu Arg Ile Leu Ala Leu Gln Leu Cys
            20                  25                  30
Gly Trp Ile Lys Lys Gly Thr Asp Val Asp Val Gly Pro Phe Leu Asn
            35                  40                  45
Ser Leu Val Gln Glu Gly Glu Trp Glu Arg Ala Ala Ala Val Ala Leu
    50                  55                  60
Phe Asn Leu Asp Ile Arg Arg Ala Ile Gln Ile Leu Asn Glu Gly Ala
65                  70                  75                  80
Ser Ser Glu Lys Gly Asp Leu Asn Leu Asn Val Val Ala Met Ala Leu
            85                  90                  95
Ser Gly Tyr Thr Asp Glu Lys Asn Ser Leu Trp Arg Glu Met Cys Ser
            100                 105                 110
Thr Leu Arg Leu Gln Leu Asn Asn Pro Tyr Leu Cys Val Met Phe Ala
        115                 120                 125
Phe Leu Thr Ser Glu Thr Gly Ser Tyr Asp Gly Val Leu Tyr Glu Asn
    130                 135                 140
Lys Val Ala Val Arg Asp Arg Val Ala Phe Ala Cys Lys Phe Leu Ser
145                 150                 155                 160
Asp Thr Gln Leu Asn Arg Tyr Ile Glu Lys Leu Thr Asn Glu Met Lys
            165                 170                 175
Glu Ala Gly Asn Leu Glu Gly Ile Leu Leu Thr Gly Leu Thr Lys Asp
            180                 185                 190
Gly Val Asp Leu Met Glu Ser Tyr Val Asp Arg Thr Gly Asp Val Gln
        195                 200                 205
Thr Ala Ser Tyr Cys Met Leu Gln Gly Ser Pro Leu Asp Val Leu Lys
    210                 215                 220
Asp Glu Arg Val Gln Tyr Trp Ile Glu Asn Tyr Arg Asn Leu Leu Asp
225                 230                 235                 240
Ala Trp Arg Phe Trp His Lys Arg Ala Glu Phe Asp Ile His Arg Ser
            245                 250                 255
Lys Leu Asp Pro Ser Ser Lys Pro Leu Ala Gln Val Phe Val Ser Cys
            260                 265                 270
Asn Phe Cys Gly Lys Ser Ile Ser Tyr Ser Cys Ser Ala Val Pro His
        275                 280                 285
Gln Gly Arg Gly Phe Ser Gln Tyr Gly Val Ser Gly Ser Pro Thr Lys
    290                 295                 300
Ser Lys Val Thr Ser Cys Pro Gly Cys Arg Lys Pro Leu Pro Arg Cys
305                 310                 315                 320
Ala Leu Cys Leu Ile Asn Met Gly Thr Pro Val Ser Ser Cys Pro Gly
            325                 330                 335
Gly Thr Lys Ser Asp Glu Lys Val Asp Leu Ser Lys Asp Lys Lys Leu
            340                 345                 350
Ala Gln Phe Asn Asn Trp Phe Thr Trp Cys His Asn Cys Arg His Gly
        355                 360                 365
Gly His Ala Gly His Met Leu Ser Trp Phe Arg Asp His Ala Glu Cys
    370                 375                 380
Pro Val Ser Ala Cys Thr Cys Lys Cys Met Gln Leu Asp Thr Thr Gly
```

```
385                 390                 395                 400
Asn Leu Val Pro Ala Glu Thr Val Gln Pro
                    405                 410
```

<210> 6149
<211> 1949
<212> DNA
<213> Homo sapiens

<400> 6149
nggccgcggg ctgcatgggc agcgcccgcg ccccgccgct gagccgtcgc ggagccgcgc
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agccctcgga gcacgaatat atacagccct gctctgggac acacctccat tggatttaaa
120
agacagtcct cgtcagcact gactttcagc tatggaatcg cagacggttg atgatgaagc
180
gccggccgtg taaatgaaga tcgggtgagg agcaggacga tgcccaaggg tgggtgccct
240
aaagcaccac agcaggaaga gcttcccctc agcagcgaca tggtggagaa gcagactggg
300
aaaaaggata aagataaagt ttctctaacc aagaccccaa aactggagcg tggcgatggc
360
gggaaggagg tgagggagcg agccagcaag cggaagctgc ccttcaccgc gggcgccaat
420
ggggagcaga aggactcgga cacagagaag cagggccctg agcggaagag gattaagaag
480
gagcctgtca cccggaaggc cgggctgctg tttggcatgg ggctgtctgg aatccgagcc
540
ggctaccccc tctccgagcg ccagcaggtg gcccttctca tgcagatgac ggccgaggag
600
tctgccaaca gcccagtgga cacaacacca aagcacccct cccagtctac agtgtgtcag
660
aagggaacgc ccaactctgc ctcaaaaacc aaagataaac tgaacaagag aaacgagcgt
720
ggagagaccc gcctgcaccg agccgccatc cgcggggacg cccggcgcat caaagagctc
780
atcagcgagg gggcagacgt caacgtcaag gacttcgcag gctggacggc gctgcacgag
840
gcctgtaacc ggggctacta cgacgtcgcg aagcagctgc tggctgcagg tgcggaggtg
900
aacaccaagg gcctagatga cgacacgcct ttgcacgacg ctgccaacaa cgggcactac
960
aaggtggtga agctgctgct gcggtacgga gggaacccgc agcagagcaa caggaaaggc
1020
gagacgccgc tgaaagtggc caactccccc acgatggtga acctcctgtt aggcaaaggc
1080
acttacactt ccagcgagga gagctcgacg gagagctcag aagaggaaga cgcaccatcc
1140
ttcgcacctt ccagttcagt cgacggcaac aacacggact ccgagttcga aaaaggcctc
1200
aagcacaagg ccaagaaccc agagccacag aaggccacgg cccccgtcaa ggacgagtat
1260
gagtttgatg aggacgacga gcaggacagg gttcctccgg tggacgacaa gcacctattg
1320
```

```
aaaaaggact acagaaaaga aacgaaatcc aatagtttta tctctatacc caaaatggag
1380
gttaaaagtt acactaaaaa taacacgatt gcaccaaaga aagcgtccca tcgtatcctg
1440
tcagacacgt cggacgagga ggacgcgagt gtcaccgtgg ggacaggaga gaagctgaga
1500
ctctcggcac atacgatatt gcctggtagt aagacacgag agccttctaa tgccaagcag
1560
cagaaggaaa aaaataaagt gaaaaagaag cgaaagaaag aaacaaaagg cagagaggtt
1620
cgcttcggaa agcggagcna tagttctgct cctcggagtc ggagagcgag tcctcagaga
1680
gtggggagga tgacagggac tctctgggga gctctggctg cctcaagggg tccccgctgg
1740
tgctgaagga cccctccctg ttcagctccc tctctgcctc ctccacctcg tctcacggga
1800
gctctgccgc ccagaagcag aaccccagcc acacagacca gcacaccaag cactggcgga
1860
cagacaattg gaaaaccatt tcttccccgg cttggtcaga ggtcagttct ttatcagact
1920
ccacaaggac gagactgaca agcgagtct
1949
```

```
<210> 6150
<211> 508
<212> PRT
<213> Homo sapiens

<400> 6150
Met Pro Lys Gly Gly Cys Pro Lys Ala Pro Gln Gln Glu Glu Leu Pro
1               5                   10                  15
Leu Ser Ser Asp Met Val Glu Lys Gln Thr Gly Lys Lys Asp Lys Asp
                20                  25                  30
Lys Val Ser Leu Thr Lys Thr Pro Lys Leu Glu Arg Gly Asp Gly Gly
            35                  40                  45
Lys Glu Val Arg Glu Arg Ala Ser Lys Arg Lys Leu Pro Phe Thr Ala
        50                  55                  60
Gly Ala Asn Gly Glu Gln Lys Asp Ser Asp Thr Glu Lys Gln Gly Pro
65                  70                  75                  80
Glu Arg Lys Arg Ile Lys Lys Glu Pro Val Thr Arg Lys Ala Gly Leu
                85                  90                  95
Leu Phe Gly Met Gly Leu Ser Gly Ile Arg Ala Gly Tyr Pro Leu Ser
                100                 105                 110
Glu Arg Gln Gln Val Ala Leu Leu Met Gln Met Thr Ala Glu Glu Ser
            115                 120                 125
Ala Asn Ser Pro Val Asp Thr Thr Pro Lys His Pro Ser Gln Ser Thr
            130                 135                 140
Val Cys Gln Lys Gly Thr Pro Asn Ser Ala Ser Lys Thr Lys Asp Lys
145                 150                 155                 160
Leu Asn Lys Arg Asn Glu Arg Gly Glu Thr Arg Leu His Arg Ala Ala
                165                 170                 175
Ile Arg Gly Asp Ala Arg Arg Ile Lys Glu Leu Ile Ser Glu Gly Ala
                180                 185                 190
Asp Val Asn Val Lys Asp Phe Ala Gly Trp Thr Ala Leu His Glu Ala
```

```
          195                     200                      205
Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly
      210                     215                 220
Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Asp Thr Pro Leu His Asp
225                     230                 235                 240
Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr
                  245                 250                 255
Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys
                  260                 265                 270
Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr
                  275                 280                 285
Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp
      290                     295                 300
Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp
305                     310                 315                 320
Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro
                  325                 330                 335
Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp
                  340                 345                 350
Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys
      355                     360                 365
Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro
      370                     375                 380
Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys
385                     390                 395                 400
Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala
                  405                 410                 415
Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr
                  420                 425                 430
Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln
      435                     440                 445
Lys Glu Lys Asn Lys Val Lys Lys Arg Lys Lys Glu Thr Lys Gly
      450                     455                 460
Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser
465                     470                 475                 480
Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp
                  485                     490                 495
Gly Ala Leu Ala Ala Ser Arg Gly Pro Arg Trp Cys
                  500                     505
```

```
<210> 6151
<211> 648
<212> DNA
<213> Homo sapiens
```

```
<400> 6151
tttttttttt tttttttga agggtgagaa atttattcag atttcttcat aattccccc
60
aaaagctcca accacgttgc cagtccttgg gtgctgcagt tggtcgggga gaggggctgt
120
gtggaggtca ccttctggta cacggagacc cgcttttcag actctgtggc gcagcaggcg
180
ggccaggaac atttgggcca ctattgctct tagccctgcc gcgcctgact ttctctcctc
240
```

```
tactttcctt  ccgaccgtag  ggacaagtgt  ggggatccgc  tttgggctcc  aaggccctgc
300
ccgcactggc  agcaccaagc  gggtgtagaa  tgactggaag  gagcagggaa  ggaagatggg
360
tgtcaactgt  cccggccagt  ggctgcgtgc  atgtgtgtgt  gaacagggaa  aaggccaccc
420
tctcccatgt  ttctcccgtc  tcctcggttc  tcctcggaga  cccgcagggc  tgcccgaggt
480
agctccgagt  tgccctgggt  cgctggggct  tggtccgcat  cctcctccgc  tagtccgctc
540
ccgcgttcca  cagcgcccg   ccgctcggtg  tgcacgcact  gcggcttaac  ccagccgaca
600
aggcacgctt  gccaaagagg  cgcgggtgtg  tgtgtgcggg  gtccgcgg
648
```

```
<210>  6152
<211>  130
<212>  PRT
<213>  Homo sapiens
```

```
<400>  6152
Met Arg Thr Lys Pro Gln Arg Pro Arg Ala Thr Arg Ser Tyr Leu Gly
 1               5                   10                  15
Gln Pro Cys Gly Ser Pro Arg Arg Thr Glu Glu Thr Gly Glu Thr Trp
            20                  25                  30
Glu Arg Val Ala Phe Ser Leu Phe Thr His Thr Cys Thr Gln Pro Leu
        35                  40                  45
Ala Gly Thr Val Asp Thr His Leu Pro Ser Leu Leu Leu Pro Val Ile
    50                  55                  60
Leu His Pro Leu Gly Ala Ala Ser Ala Gly Arg Ala Leu Glu Pro Lys
65                  70                  75                  80
Ala Asp Pro His Thr Cys Pro Tyr Gly Arg Lys Glu Ser Arg Gly Glu
                85                  90                  95
Lys Val Arg Arg Gly Arg Ala Lys Ser Asn Ser Gly Pro Asn Val Pro
            100                 105                 110
Gly Pro Pro Ala Ala Pro Gln Ser Leu Lys Ser Gly Ser Pro Ser Thr
        115                 120                 125
Arg Arg
    130
```

```
<210>  6153
<211>  1810
<212>  DNA
<213>  Homo sapiens
```

```
<400>  6153
gatgcagtta  cctgtgtgga  cttcagtatc  aacacaaagc  agctggccag  tggtnccatg
60
gactcatgcc  tcatggtctg  gcacatgaag  ctgcagtcac  gcgcctaccg  cttcactggc
120
cacaaggatg  ccgtcacctg  tgtgaacttc  tctccttcgg  acacctgct   tgcttccggc
180
tcccgagaca  agactgtccg  catctgggta  cccaatgtca  aggtgagtc   cactgtgttt
240
```

5335

```
cgtgcacaca cagccacagt gaggagtgtc cacttctgca gtgatggcca gtccttcgtg
300
acagcctctg acgacaagac agtcaaagtg tgggcaactc atcgccagaa attcctgttc
360
tccctgagcc agcatatcaa ctgggtccgc tgtgccaagt tctcccccga cgggcggctc
420
atcgtgtctg ccagtgatga caagactgtt aagctgtggg acaagagcag ccgggaatgt
480
gtccactcgt attgtgagca tggcggcttt gtcacctatg tggacttcca ccccagtggg
540
acgtgcattg ccgctgccgg catggacaac acagtgaagg tgtgggacgt gcggactcac
600
cggctgctgc agcattatca gttgcacagt gcagcagtga acgggctctc tttccacccg
660
tcgggaaact acctgatcac agcctccagt gactcaaccc tgaagatcct ggacctgatg
720
gagggccggc tgctctacac actccacggg catcagggac cagccaccac tgttgccttt
780
tcaagaacgg gggagtattt tgcttctgga ggctctgatg aacaagtgat ggtttggaag
840
agtaactttg atattgttga tcatggagaa gtcacgaaag tgccgaggcc cccagccaca
900
ctggccagct ccatggggaa tctgccagaa gtggacttcc ctgtcccccc aggcagaggc
960
tggagtgtgg agtctgtgca gagccagccc caggagcccg tgagtgtgcc ccagacactg
1020
actagcacgc tggagcacat tgtgggccag ctggatgtcc tcactcagac agtctccatt
1080
ctggagcagc ggttgacact gacagaagac aagctgaagc agtgtctgga gaaccagcag
1140
ctaatcatgc agagagcaac accatgatca ggggagcagg aatcaggagc tcggtggatt
1200
tgcaggtggc aggccaggga tttgtaccat gggacttggg taaataaagg ggactgaact
1260
ctgtgggaat cacatccata ctggagccct ggatttttgc agttctgccc tccaccttgc
1320
tatctgcacc aggaggctct ccacctggca gccagaggtc cccagtgggc cgggctcaca
1380
cacaaatgat gcttcagacc cgaatgagag gaccacattt tgcttaatgt aaaggagcca
1440
cttgaaaatg tctgctcctt cggggtcctg agattgtggc tcccctctg gaggaggtgg
1500
ctccacgatg ccttgatttt cactcatcat ttggacatgt gactggcttt tcctacctct
1560
gccatggtgt agaaattgat tgcacattga ttggatgagc cgggggtttt ctctaaatct
1620
gactaaaggc ccaaagtggg cccatctgag tcaggtttgt tgagaacaag ccctctcaag
1680
tgggtggtgg cttttcagtg ccctgattt ctgttccaca cgtgttcact ggagccaggt
1740
gacttcctcc ttgcgtgagt gagggcacag gaatctcaaa attaaacctg acttcattgc
1800
aaaaaaaaaa
1810
```

```
<210> 6154
<211> 388
<212> PRT
<213> Homo sapiens

<400> 6154
Asp Ala Val Thr Cys Val Asp Phe Ser Ile Asn Thr Lys Gln Leu Ala
 1               5                  10                  15
Ser Gly Xaa Met Asp Ser Cys Leu Met Val Trp His Met Lys Leu Gln
            20                  25                  30
Ser Arg Ala Tyr Arg Phe Thr Gly His Lys Asp Ala Val Thr Cys Val
        35                  40                  45
Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
    50                  55                  60
Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
65                  70                  75                  80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
                85                  90                  95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
            100                 105                 110
Thr His Arg Gln Lys Phe Leu Phe Ser Leu Ser Gln His Ile Asn Trp
        115                 120                 125
Val Arg Cys Ala Lys Phe Ser Pro Asp Gly Arg Leu Ile Val Ser Ala
    130                 135                     140
Ser Asp Asp Lys Thr Val Lys Leu Trp Asp Lys Ser Ser Arg Glu Cys
145                 150                 155                 160
Val His Ser Tyr Cys Glu His Gly Gly Phe Val Thr Tyr Val Asp Phe
                165                 170                 175
His Pro Ser Gly Thr Cys Ile Ala Ala Ala Gly Met Asp Asn Thr Val
            180                 185                 190
Lys Val Trp Asp Val Arg Thr His Arg Leu Leu Gln His Tyr Gln Leu
        195                 200                 205
His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
    210                 215                 220
Leu Ile Thr Ala Ser Ser Asp Ser Thr Leu Lys Ile Leu Asp Leu Met
225                 230                 235                 240
Glu Gly Arg Leu Leu Tyr Thr Leu His Gly His Gln Gly Pro Ala Thr
                245                 250                 255
Thr Val Ala Phe Ser Arg Thr Gly Glu Tyr Phe Ala Ser Gly Gly Ser
            260                 265                 270
Asp Glu Gln Val Met Val Trp Lys Ser Asn Phe Asp Ile Val Asp His
        275                 280                 285
Gly Glu Val Thr Lys Val Pro Arg Pro Ala Thr Leu Ala Ser Ser
    290                 295                 300
Met Gly Asn Leu Pro Glu Val Asp Phe Pro Val Pro Pro Gly Arg Gly
305                 310                 315                 320
Trp Ser Val Glu Ser Val Gln Ser Gln Pro Gln Glu Pro Val Ser Val
                325                 330                 335
Pro Gln Thr Leu Thr Ser Thr Leu Glu His Ile Val Gly Gln Leu Asp
            340                 345                 350
Val Leu Thr Gln Thr Val Ser Ile Leu Glu Gln Arg Leu Thr Leu Thr
        355                 360                 365
Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn Gln Gln Leu Ile Met Gln
```

```
     370              375            380
Arg Ala Thr Pro
385


<210> 6155
<211> 995
<212> DNA
<213> Homo sapiens


<400> 6155
aacagccaca gacgtatgtg taatatgatg ggctttagaa tgtacctgca aagcagtttt
60
tttttttttt ccatttggag gaaaaaagat gaaccaaaaa agactgaatt gggatgctaa
120
aataacagcg atttattatt aaggaaatga tacgcttttg tcccattcaa ataatgtttt
180
tattcccctt ttctttattc ttgggaggtt cctattgttg tgccaggtcg ttttcactga
240
acgattttta aaggtattca ccagtcccac gtgtgaccgg ttgcattttt actgtgcagg
300
accatcgtga agcctgtggc caaagagttt gatccagaca tggtcttagt atctgctgga
360
tttgatgcat tggaaggcca cacccctcct ctaggagggt acaaagtgac ggcaaaatgt
420
tttggtcatt tgacgaagca attgatgaca ttggctgatg gacgtgtggt gttggctcta
480
gaaggaggac atgatctcac agccatctgt gatgcatcag aagcctgtgt aaatgccctt
540
ctaggaaatg agctggagcc acttgcagaa gatattctcc accaaagccc gaatatgaat
600
gctgttattt ctttacagaa gatcattgaa attcaaaaac tgctggtgag cctatggaag
660
aggagccagc cttgtgaagt gccaagtccc cctctgatat ttcctgtgtg tgacatcatt
720
gtgtatcccc cacccccagt accctcagac atgtcttgtc tgctgcctgg gtggcacaga
780
ttcaatggaa cataaacact gggcacaaaa ttctgaacag cagcttcact tgttctttgg
840
atggacttga aagggcatta aagattcctt aaacgtaacc gctgtgattc tagagttaca
900
gtaaaccacg attggaagaa actgcttcca gcatgctttt aatatgctgg gtgacccact
960
cctagacacc aagtttgaac tagaaacatt cagta
995


<210> 6156
<211> 164
<212> PRT
<213> Homo sapiens


<400> 6156
Thr Ile Val Lys Pro Val Ala Lys Glu Phe Asp Pro Asp Met Val Leu
1               5                    10                   15
Val Ser Ala Gly Phe Asp Ala Leu Glu Gly His Thr Pro Pro Leu Gly
```

```
                    20                    25                    30
Gly Tyr Lys Val Thr Ala Lys Cys Phe Gly His Leu Thr Lys Gln Leu
            35                    40                    45
Met Thr Leu Ala Asp Gly Arg Val Val Leu Ala Leu Glu Gly Gly His
        50                    55                    60
Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Asn Ala Leu
65                    70                    75                    80
Leu Gly Asn Glu Leu Glu Pro Leu Ala Glu Asp Ile Leu His Gln Ser
                85                    90                    95
Pro Asn Met Asn Ala Val Ile Ser Leu Gln Lys Ile Ile Glu Ile Gln
            100                   105                   110
Lys Leu Leu Val Ser Leu Trp Lys Arg Ser Gln Pro Cys Glu Val Pro
        115                   120                   125
Ser Pro Pro Leu Ile Phe Pro Val Cys Asp Ile Ile Val Tyr Pro Pro
        130                   135                   140
Thr Pro Val Pro Ser Asp Met Ser Cys Leu Leu Pro Gly Trp His Arg
145                   150                   155                   160
Phe Asn Gly Thr
```

```
<210> 6157
<211> 2135
<212> DNA
<213> Homo sapiens

<400> 6157
natttcattt tatcccaact acttttgagg taggtattat cctgttttac aaacgaagaa
60
actaaggctc agtgagatta atgatccaag gtcatataat ctaagtggta gagctgggat
120
ttgaacttca gtttgactaa ctatgaaact tttaactgct attctttctc aactttcctt
180
ttttctgcag gatctggcga catggccaga aaggctctca agcttgcttc gtggaccagc
240
atggctcttg ctgcctctgg catctacttc tacagtaaca agtacttgga ccctaatgac
300
tttggcgctg tcagggtggg cagagcagtt gctacgacgg ctgtcatcag ttacgactac
360
ctcacttccc tgaagagtgt cccttatggc tcagaggagt acttgcagct gagatctaag
420
atccatgatt tgttccagag cttcgatgac acccctctgg gacggcctc cctggcccag
480
gtccacaagg cagtgctgca tgatgggcgg acggtggccg tgaaggtcca gcaccaaag
540
gtgcgggctc agagctcgaa ggacattctc ctgatggagg tgctcgttct ggctgtgaag
600
cagctgttcc cagagtttga gtttatgtgg cttgtggatg aagccaagaa gaacctgcct
660
ttggagctgg atttcctcaa tgaagggagg aatgctgaga aggtgtccca gatgctcagg
720
cattttgact tcttgaaggt cccccgaatc cactgggacc tgtccacgga gcgggtcctc
780
ctgatggagt ttgtggatgg cgggcaggtc aatgacagag actacatgga gaggaacaag
840
```

atcgacgtca atgagatctc acgccacctg ggcaagatgt atagtgagat gatcttcgtc
900

aatggcttcg tgcactgcga tccccacccc ggcaacgtac tggtgcggaa gcaccccggc
960

acgggaaagg cggagattgt cctgttggac catgggcttt accagatgct cacggaagaa
1020

ttccgcctga attactgcca cctctggcag tctctgatct ggactgacat gaagagagtg
1080

aaggagtaca gccagcgact gggagccggg gatctctacc ccttgtttgc ctgcatgctg
1140

acggcgcgat cgtgggactc ggtcaacaga ggcatcagcc aagctcccgt cactgccact
1200

gaggacttag agattcgcaa caacgcggcc aactacctcc cccagatcag ccatctcctc
1260

aaccacgtgc cgcgccagat gctgctcatc ttgaagacca cgacctgct gcgtggcatt
1320

gaggccgccc tgggcacccg cgccagcgcc agctcctttc tcaacatgtc acgttgctgc
1380

atcagagcgc tagctgagca caagaagaag aatacctgtt cattcttcag aaggacccag
1440

atctctttca gcgaggcctt caacttatgg cagatcaacc tccatgagct catcctgcgt
1500

gtgaaggggt tgaagctggc tgaccgggtc ttggccctaa tatgctggct gttccctgct
1560

ccactctgag tggaattgct ctccctgccc cattctggtg tctttccact cctcagcccc
1620

tcatcttgcc tccacccagc tgctccattt ttgccacatc gtggcccgca gccccagagt
1680

cactgtccat gtcaccatcc ttctcctcct ttggaatcct ctccgcacac tgtggccctt
1740

gtctcagggc ccacaagctg aactgtggca tagctctctc ttcttctcca agaagactca
1800

gcagcctaca ttcccattcc tggtatgtgc cattgggttg gatgtcccca ctacttccgt
1860

taacccttcc cattgtcaag atgtgccacg ggtgccactg ggggcacact gaacttgtag
1920

ggagtgtgat tttgttggag gtgcacatgg tctctgaatt tgacagagaa caccttccct
1980

ttccttgcca tgtcaccctc cagaggaagt cacacctcag cgaggtggtt tggcatctgg
2040

ggccaactcc attacagcta tgagctcact gctgtcagtg acgtttggtg ttttctgtac
2100

tgtgtttcaa taaaaactcc ttcaaggttg aaaaa
2135

<210> 6158
<211> 455
<212> PRT
<213> Homo sapiens

<400> 6158
Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu
 1   5   10   15
Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn

5340

```
                    20                    25                    30
Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr Thr Ala Val
        35                    40                    45
Ile Ser Tyr Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro Tyr Gly Ser
    50                    55                    60
Glu Glu Tyr Leu Gln Leu Arg Ser Lys Ile His Asp Leu Phe Gln Ser
65                    70                    75                    80
Phe Asp Asp Thr Pro Leu Gly Thr Ala Ser Leu Ala Gln Val His Lys
                85                    90                    95
Ala Val Leu His Asp Gly Arg Thr Val Ala Val Lys Val Gln His Pro
            100                   105                   110
Lys Val Arg Ala Gln Ser Ser Lys Asp Ile Leu Leu Met Glu Val Leu
        115                   120                   125
Val Leu Ala Val Lys Gln Leu Phe Pro Glu Phe Glu Phe Met Trp Leu
    130                   135                   140
Val Asp Glu Ala Lys Lys Asn Leu Pro Leu Glu Leu Asp Phe Leu Asn
145                   150                   155                   160
Glu Gly Arg Asn Ala Glu Lys Val Ser Gln Met Leu Arg His Phe Asp
                165                   170                   175
Phe Leu Lys Val Pro Arg Ile His Trp Asp Leu Ser Thr Glu Arg Val
            180                   185                   190
Leu Leu Met Glu Phe Val Asp Gly Gly Gln Val Asn Asp Arg Asp Tyr
        195                   200                   205
Met Glu Arg Asn Lys Ile Asp Val Asn Glu Ile Ser Arg His Leu Gly
    210                   215                   220
Lys Met Tyr Ser Glu Met Ile Phe Val Asn Gly Phe Val His Cys Asp
225                   230                   235                   240
Pro His Pro Gly Asn Val Leu Val Arg Lys His Pro Gly Thr Gly Lys
                245                   250                   255
Ala Glu Ile Val Leu Leu Asp His Gly Leu Tyr Gln Met Leu Thr Glu
            260                   265                   270
Glu Phe Arg Leu Asn Tyr Cys His Leu Trp Gln Ser Leu Ile Trp Thr
        275                   280                   285
Asp Met Lys Arg Val Lys Glu Tyr Ser Gln Arg Leu Gly Ala Gly Asp
    290                   295                   300
Leu Tyr Pro Leu Phe Ala Cys Met Leu Thr Ala Arg Ser Trp Asp Ser
305                   310                   315                   320
Val Asn Arg Gly Ile Ser Gln Ala Pro Val Thr Ala Thr Glu Asp Leu
                325                   330                   335
Glu Ile Arg Asn Asn Ala Ala Asn Tyr Leu Pro Gln Ile Ser His Leu
                340                   345                   350
Leu Asn His Val Pro Arg Gln Met Leu Leu Ile Leu Lys Thr Asn Asp
        355                   360                   365
Leu Leu Arg Gly Ile Glu Ala Ala Leu Gly Thr Arg Ala Ser Ala Ser
    370                   375                   380
Ser Phe Leu Asn Met Ser Arg Cys Cys Ile Arg Ala Leu Ala Glu His
385                   390                   395                   400
Lys Lys Lys Asn Thr Cys Ser Phe Phe Arg Arg Thr Gln Ile Ser Phe
            405                   410                   415
Ser Glu Ala Phe Asn Leu Trp Gln Ile Asn Leu His Glu Leu Ile Leu
        420                   425                   430
Arg Val Lys Gly Leu Lys Leu Ala Asp Arg Val Leu Ala Leu Ile Cys
        435                   440                   445
Trp Leu Phe Pro Ala Pro Leu
```

450 455

<210> 6159
<211> 4310
<212> DNA
<213> Homo sapiens

<400> 6159
ctcgaggtgc gcgccggccc ggactcggcg ggcatcgccc tctacagcca tgaagatgtg
60
tgtgtcttta agtgctcagt gtcccgagag acagagtgca gccgtgtggg caagcagtcc
120
ttcatcatca ccctgggctg caacagcgtc ctcatccagt tcgccacacc caacgatttc
180
tgttccttct acaacatcct gaaaacctgc cggggccaca ccctggagcg gtctgtgttc
240
agcgagcgga cggaggagtc ttctgccgtg cagtacttcc agttttatgg ctacctgtcc
300
cagcagcaga acatgatgca ggactacgtg cggacaggca cctaccagcg cgccatcctg
360
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480
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1380

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2100
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2160
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2820
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2880
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2940
catagaaaat aaaagtgttt gctttgtaag aaaagtctgg aaagtagcag aatcatctca
3000
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3360
gcgccccaaa gagccactgc agccaaggca cagggatgag ccacaggacc accatgggga
3420
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3660
caaaggccaa cgtggcacag atccagaagg ggccatacag atccggccga ttccgcagat
3720
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3780
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3840
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3900
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4140
caggtgcgct ccgcccccc tcacctgagg ccacctgggc cggcgtggct ggggctcatc
4200
cctgtgcctt ggctgcagtg gctctttggg gcgctggccc tgggcctgtc agccgccggg
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4310

<210> 6160
<211> 551
<212> PRT
<213> Homo sapiens

<400> 6160
Leu Glu Val Arg Ala Gly Pro Asp Ser Ala Gly Ile Ala Leu Tyr Ser
1   5   10   15
His Glu Asp Val Cys Val Phe Lys Cys Ser Val Ser Arg Glu Thr Glu

```
                20                      25                      30
    Cys Ser Arg Val Gly Lys Gln Ser Phe Ile Ile Thr Leu Gly Cys Asn
            35                      40                      45
    Ser Val Leu Ile Gln Phe Ala Thr Pro Asn Asp Phe Cys Ser Phe Tyr
            50                      55                      60
    Asn Ile Leu Lys Thr Cys Arg Gly His Thr Leu Glu Arg Ser Val Phe
    65                      70                      75                      80
    Ser Glu Arg Thr Glu Glu Ser Ser Ala Val Gln Tyr Phe Gln Phe Tyr
                        85                      90                      95
    Gly Tyr Leu Ser Gln Gln Gln Asn Met Met Gln Asp Tyr Val Arg Thr
                    100                     105                     110
    Gly Thr Tyr Gln Arg Ala Ile Leu Gln Asn His Thr Asp Phe Lys Asp
                115                     120                     125
    Lys Ile Val Leu Asp Val Gly Cys Gly Ser Gly Ile Leu Ser Phe Phe
                130                     135                     140
    Ala Ala Gln Ala Gly Ala Arg Lys Ile Tyr Ala Val Glu Ala Ser Thr
    145                     150                     155                     160
    Met Ala Gln His Ala Glu Val Leu Val Lys Ser Asn Asn Leu Thr Asp
                        165                     170                     175
    Arg Ile Val Val Ile Pro Gly Lys Val Glu Glu Val Ser Leu Pro Glu
                    180                     185                     190
    Gln Val Asp Ile Ile Ile Ser Glu Pro Met Gly Tyr Met Leu Phe Asn
                195                     200                     205
    Glu Arg Met Leu Glu Ser Tyr Leu His Ala Lys Lys Tyr Leu Lys Pro
                210                     215                     220
    Ser Gly Asn Met Phe Pro Thr Ile Gly Asp Val His Leu Ala Pro Phe
    225                     230                     235                     240
    Thr Asp Glu Gln Leu Tyr Met Glu Gln Phe Thr Lys Ala Asn Phe Trp
                        245                     250                     255
    Tyr Gln Pro Ser Phe His Gly Val Asp Leu Ser Ala Leu Arg Gly Ala
                    260                     265                     270
    Ala Val Asp Glu Tyr Phe Arg Gln Pro Val Val Asp Thr Phe Asp Ile
                275                     280                     285
    Arg Ile Leu Met Ala Lys Ser Val Lys Tyr Thr Val Asn Phe Leu Glu
                290                     295                     300
    Ala Lys Glu Gly Asp Leu His Arg Ile Glu Ile Pro Phe Lys Phe His
    305                     310                     315                     320
    Met Leu His Ser Gly Leu Val His Gly Leu Ala Phe Trp Phe Asp Val
                        325                     330                     335
    Ala Phe Ile Gly Ser Ile Met Thr Val Trp Leu Ser Thr Ala Pro Thr
                    340                     345                     350
    Glu Pro Leu Thr His Trp Tyr Gln Val Arg Cys Leu Phe Gln Ser Pro
                355                     360                     365
    Leu Phe Ala Lys Ala Gly Asp Thr Leu Ser Gly Thr Cys Leu Leu Ile
                370                     375                     380
    Ala Asn Lys Arg Gln Ser Tyr Asp Ile Ser Ile Val Ala Gln Val Asp
    385                     390                     395                     400
    Gln Thr Gly Ser Lys Ser Ser Asn Leu Leu Asp Leu Lys Asn Pro Phe
                    405                     410                     415
    Phe Arg Tyr Thr Gly Thr Thr Pro Ser Pro Pro Pro Gly Ser His Tyr
                420                     425                     430
    Thr Ser Pro Ser Glu Asn Met Trp Asn Thr Gly Ser Thr Tyr Asn Leu
                435                     440                     445
    Ser Ser Gly Met Ala Val Ala Gly Met Pro Thr Ala Tyr Asp Leu Ser
```

5345

<pre>
           450   455   460
Ser Val Ile Ala Ser Gly Ser Ser Val Gly His Asn Asn Leu Ile Pro
465   470   475   480
Leu Ala Asn Thr Gly Ile Val Asn His Thr His Ser Arg Met Gly Ser
                   485   490   495
Ile Met Ser Thr Gly Ile Val Gln Gly Ser Ser Gly Ala Gln Gly Ser
                   500   505   510
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val Asn Ser Gln Phe Thr
              515   520   525
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro Met Ser Ile Pro Thr
         530   535   540
Asn Thr Met His Tyr Gly Ser
545   550
</pre>

<210> 6161
<211> 1489
<212> DNA
<213> Homo sapiens

<400> 6161
ggctgcatga tcttcagcag attcagtaca gagggaagtg agctgtggga gaggaaggag
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gatgggggaa atggcaagaa aaggagcacc ctgcttagaa agggaacgga gccgggtgtg
120
gtggctcacg cctgcaatcc anacaccttg ggaggccgaa gcaaggagat cacctgagcc
180
caagagtttg agaccaccca catagcaaga ccccatctct atttttttgga aaaaaaaaaa
240
aaaagcagca accagcagga tgggtggaaa aaagttgctg aaggctcttc aagatcctct
300
ctgcctgctc cttctctcac agagggacag gggagggtga tgagtcagtg gactgaatgt
360
ccccatgggg atgaaggatg gttggggtca gggtcctaga gggagggctg gaaggaggga
420
aggagatggc cagagaagga tgtaggacac agaggtgccg ccgtggatca ccaagaggtt
480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
tctgtgcctg cacacagctg aaatccccag gaaataagac gggagcaggg tgggtttctg
600
cagccgaggt gagaccaaag tgccagctca ctgccaccct cagtaaagac taacttgccc
660
ttccccacaa ctcccctccc agaagtagct tgctctcctc tgcctgccac acatcggggg
720
gctcagggaa agctccccct ccctggacag ctagtgttcc ctaggccaag gccagtccct
780
gcagagatga ggagctggga aatcccctcc tcccatcccg cacgtccacg cgtgccagat
840
cctgtgctgc gggcttttca cacacagcct cttagacgct tagcctgtga ggcgggtgct
900
gttgtccttc cttcccattt tgcaactgag caaacagcct gaaagagaca aaaaccaggt
960
agttagcatg accccaaagc cactccctgg tctacgctgt tctgcagcct gagcctgggg
1020

```
tggccaggtg gggttgtgca gtgagggggg gaaggagaat agcccccaaa aatgctgccg
1080
gaatggtaaa gggcctggac tgcaaagcta gtgacttgag ctttattttg tggcactgga
1140
ggttttccca gtcattgtaa tgatacaatc agatttgcgt tgtcttcaag ttaccatggt
1200
aaccgtactt ccacccacca agagtggatt ggagaaggca aaactagggc agagaagcca
1260
gggagtgttg agaaggtctg aacccagaca gtgggcagct gggccccaag acggatgggg
1320
gactccagaa gcgtggagct ggcagagaga aacctgcccg gggcatcaga gaaaagggcg
1380
actgtgcagg aacagagtag atgaggtggg gaacctttgg gtaagaagag ctgaatcagg
1440
agcattgagg cagcggtttt caaacctcag aagcaacagc agggccggc.
1489
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```
<210> 6162
<211> 58
<212> PRT
<213> Homo sapiens
```

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<400> 6162
Gly Cys Met Ile Phe Ser Arg Phe Ser Thr Glu Gly Ser Glu Leu Trp
 1               5                  10                  15
Glu Arg Lys Glu Asp Gly Gly Asn Gly Lys Lys Arg Ser Thr Leu Leu
            20                  25                  30
Arg Lys Gly Thr Glu Pro Gly Val Val Ala His Ala Cys Asn Pro Xaa
         35                  40                  45
Thr Leu Gly Gly Arg Ser Lys Glu Ile Thr
     50                  55
```

```
<210> 6163
<211> 713
<212> DNA
<213> Homo sapiens.
```

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<400> 6163
gtggaaatga gcctctcatt aaaacacgtg ctttctggga gccgtgatga acgtgagtgt
60
gagatgagtc cagctgcggt cagagccatg ggatgtgggt cactgtgacc cagtgggtca
120
caggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
180
gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaaccccaa tcacgctctg
240
atggataccg gtacctgggc aaggataccg tggatggact tgattcttct ctcctgaaat
300
gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaaccctct aaaacccgag
360
tgtcattttt agaatcaaaa aggaaggaag gcagtggctg gctgcactgg tcagtaacga
420
gatctggagc ttttcgcctt aaggtcactg tttaaaactc tgccctgggt cagttgtaac
480
```

5347

agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgccaa gaggggctgt
540

gtctgttggt taccacgcgg cgagctcccg ggacacctcc tgacacctcc tgacagtgtc
600

tctttctcta ggagtctcct ctcttcccac ccaccatggc ggcctggcct ggaggggagg
660

cattggggac tgagtccttc cccgacaggg agtctctctc ccccctggcg cgc
713

<210> 6164
<211> 120
<212> PRT
<213> Homo sapiens

<400> 6164
Met Trp Val Thr Val Thr Gln Trp Val Thr Gly Ala Glu Gln Gly Arg
 1   5   10   15
Ala Gly Arg Leu Lys Gln Asn Leu Gln Glu Lys Ser Lys Gly Ala Gln
             20   25   30
Pro Leu Pro Gly Lys Ala Gly Leu Ala Leu Leu Lys Pro Gln Ser Arg
         35   40   45
Ser Asp Gly Tyr Arg Tyr Leu Gly Lys Asp Thr Val Asp Gly Leu Asp
     50   55   60
Ser Ser Leu Leu Lys Cys Thr Arg Arg Cys Met Arg Gly Phe Arg Leu
65   70   75   80
Pro Glu Lys Gln Pro Ser Lys Thr Arg Val Ser Phe Leu Glu Ser Lys
             85   90   95
Arg Lys Glu Gly Ser Gly Trp Leu His Trp Ser Val Thr Arg Ser Gly
            100   105   110
Ala Phe Arg Leu Lys Val Thr Val
        115   120

<210> 6165
<211> 1004
<212> DNA
<213> Homo sapiens

<400> 6165
cccagccgga tcgggcggcg aaggccggcg cggcgagcag caaccatgtc ggtgttcggg
60

aagctgttcg gggctggagg gggtaaggcc ggcaagggcg gcccgacccc ccaggaggcc
120

atccagcggc tgcgggacac ggaagagatg ttaagcaaga aacaggagtt cctggagaag
180

aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
240

ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgcagat cgacggcaca
300

ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
360

ctcaagaaca tgggctatgc cgccaaggcc atgaaggcgg cccatgacaa catggacatc
420

gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
480

5348

tcaacagcaa tttcgaaacc tgtagggttt ggagaagagt ttgacgagga tgagctcatg
540
gcggaattag aagaactaga acaggaggaa ctagacaaga atttgctgga aatcagtgga
600
cccgaaacag tccctctacc aaatgttccc tctatagccc taccatcaaa acccgccaag
660
aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
720
tggggtccag cgctggctgg gcccagacag actgtggtgg cctgcgcagc gagcaggcgt
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gtgcgtgtgt ggggcaggca ggatgtggtg caggcaggtt ccatcgcttt cgactctcac
840
tccaaagcag tagggccgcg ttgctgctca ctctctgcat agcatggtct gcacctggga
900
gttggccggg gggagggggg cgagcgggct ggcacgtgcc tgctgtttat aatgttgaat
960
ttctgtaaaa taaactgtat ttgcaaatcc aaaaaaaaaa aaaa
1004

<210> 6166
<211> 239
<212> PRT
<213> Homo sapiens

<400> 6166
Pro Ser Arg Ile Gly Arg Arg Arg Pro Ala Arg Arg Ala Ala Thr Met
 1   5   10   15
Ser Val Phe Gly Lys Leu Phe Gly Ala Gly Gly Gly Lys Ala Gly Lys
                20   25   30
Gly Gly Pro Thr Pro Gln Glu Ala Ile Gln Arg Leu Arg Asp Thr Glu
             35   40   45
Glu Met Leu Ser Lys Lys Gln Glu Phe Leu Glu Lys Lys Ile Glu Gln
         50   55   60
Glu Leu Thr Ala Ala Lys Lys His Gly Thr Lys Asn Lys Arg Ala Ala
65   70   75   80
Leu Gln Ala Leu Lys Arg Lys Arg Tyr Glu Lys Gln Leu Ala Gln
                85   90   95
Ile Asp Gly Thr Leu Ser Thr Ile Glu Phe Gln Arg Glu Ala Leu Glu
                100   105   110
Asn Ala Asn Thr Asn Thr Glu Val Leu Lys Asn Met Gly Tyr Ala Ala
             115   120   125
Lys Ala Met Lys Ala Ala His Asp Asn Met Asp Ile Asp Lys Val Asp
         130   135   140
Glu Leu Met Gln Asp Ile Ala Asp Gln Gln Glu Leu Ala Glu Glu Ile
145   150   155   160
Ser Thr Ala Ile Ser Lys Pro Val Gly Phe Gly Glu Glu Phe Asp Glu
                165   170   175
Asp Glu Leu Met Ala Glu Leu Glu Glu Leu Glu Gln Glu Glu Leu Asp
             180   185   190
Lys Asn Leu Leu Glu Ile Ser Gly Pro Glu Thr Val Pro Leu Pro Asn
         195   200   205
Val Pro Ser Ile Ala Leu Pro Ser Lys Pro Ala Lys Lys Lys Glu Glu
         210   215   220
Glu Asp Asp Asp Met Lys Glu Leu Glu Asn Trp Ala Gly Ser Met

225   230   235

<210> 6167
<211> 1220
<212> DNA
<213> Homo sapiens

<400> 6167
ngccatacag cattttagtt ttgttctttc cattaactga agtcacgagg tatgcctcct
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tggaaactcc aacagttaag agattctcat gtattccatg aaataaaaag caaagaaaaa
120
tcaaacttgt cttaatgaga tggaagtgtt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctcctcc cgggtctgcg cggacgcggc ctccttacct
240
catttgtcct cgcccctccc cgtccctcta cgcgttttgg tccctgtttg gtgctttctg
300
tttgcagcta cggcagtgag tatgtatgtg acggaccccg agtcacccgc ggcctgggac
360
ccctgcctac cctccgtctc gccagccgag ctgtggaact agcgcgtgcc ccctcgccga
420
cctcggcgtc tccggtccgc ccctcacttg tggtggggcg cagctcctgg tccctcagct
480
gcgcgccgcc ccacgcggcc gggctgcggg tctagggggt ccgcatctcc ctggctttcc
540
aagggctaag gtcgtgattc tagggcggct gggcgtccag ggcctcggtg ggggtggcgt
600
gtctgccctt tttatctccc cgcaaggccc ccagtcttct agggaagcca gtcagtgaag
660
cgcggaggtc cgggcgcgcc gagagagagt ccagtctttg aggaccgagt agtcctgggc
720
cacctcccgc ctctgctgtc agaagcagca gctgccgccg tggaatccaa aatttcggga
780
gctgtgaccc tttcctcatg taaaacgagt agtcttggac gatctgggca taggaaccaa
840
tcagaaacaa tcgcttcagc aatcaagacc attgttcatc atggaggaac ccatggatac
900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
atttggacag tatccatcga tgcagatgaa ccacatccag gcactgggga agtggaggac
1020
atagaacagc tcaatcagtg tttgatccaa cacttccatc tcattaagac aagtttgatt
1080
tttctttgct ttttatttca tggaatacat gagaatctct taactgttgg agtttccaag
1140
gaggcatacc tcatgacttc agttaatgga aagaacaaaa ctaaaatgct gtatggccaa
1200
agccacaaag ggaaggatcc
1220

<210> 6168
<211> 90
<212> PRT

<213> Homo sapiens

<400> 6168
Ala Lys Trp Gln Ile Trp Thr Val Ser Ile Asp Ala Asp Glu Pro His
1   5   10   15
Pro Gly Thr Gly Glu Val Glu Asp Ile Glu Gln Leu Asn Gln Cys Leu
            20   25   30
Ile Gln His Phe His Leu Ile Lys Thr Ser Leu Ile Phe Leu Cys Phe
        35   40   45
Leu Phe His Gly Ile His Glu Asn Leu Leu Thr Val Gly Val Ser Lys
    50   55   60
Glu Ala Tyr Leu Met Thr Ser Val Asn Gly Lys Asn Lys Thr Lys Met
65   70   75   80
Leu Tyr Gly Gln Ser His Lys Gly Lys Asp
                85   90

<210> 6169
<211> 720
<212> DNA
<213> Homo sapiens

<400> 6169
tgagggcttc gatcccttct ctgatttgct gtcagccatg aacggatgga tgtgatgcct
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gctagccaaa aggcttccct ctgtgtgttg cagtcctgtg gcattatgca tgccccctcc
120
cagtgacccc aggcttttta tggctgtgaa acacgttaaa atttcagggt aagacgtgac
180
cttttgaggt gactataact gaagattgct ttacagaagc ccaaaaaggt tttttgagtc
240
atgatgcaag aatctgggac tgagacaaaa agtaacggtt cagccatcca gaatgggtcg
300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggcggtc aacggagag
360
acgccggccg tggacatcgg ggcagctgac ctcgcccacg cccagcagca gcagcaacag
420
tggcatctca taaaccatca gccctctagg agtcccagca gttggcttaa gagactaatt
480
tcaagccctt gggagttgga agtcctgcag gtcccttgtg gggagcagtt gctgagacga
540
agatgagtgg acctgtgtgt cagcctaacc cttccccatt ttgaataaaa ttattctttg
600
gagaaatggt tcccactgct ttcatgcaaa aataaaaatt aaacgaaaaa cagcttaagc
660
ctgtgaagaa ggaaatactg agctagccag caaaagagag aaagaagagg aggggagagg
720

<210> 6170
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6170
Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

```
   1                 5                      10                      15
Gln Asn Gly Ser Gly Gly Ser Asn His Leu Leu Glu Cys Gly Gly Leu
             20                      25                 30
Arg Glu Gly Arg Ser Asn Gly Glu Thr Pro Ala Val Asp Ile Gly Ala
        35                      40                 45
Ala Asp Leu Ala His Ala Gln Gln Gln Gln Gln Trp His Leu Ile
     50                      55                 60
Asn His Gln Pro Ser Arg Ser Pro Ser Ser Trp Leu Lys Arg Leu Ile
65                      70                      75                 80
Ser Ser Pro Trp Glu Leu Glu Val Leu Gln Val Pro Cys Gly Glu Gln
                 85                      90                 95
Leu Leu Arg Arg Arg
             100
```

<210> 6171
<211> 1130
<212> DNA
<213> Homo sapiens

<400> 6171
nncccgctag gagttcctag taaagtggcg ggagccgcag ctatggagcc gcaggaggag
60

agagaaacgc aggttgctgc gtggttaaaa aaaatatttg gagatcatcc tattccacag
120

tatgaggtga acccacggac cacagagatt ttacatcacc tttcagaacg caacagggtc
180

cgggacaggg atgtctacct ggtaatagag gacttgaagc agaaagcaag tgaatacgag
240

tcagaagcca agtatcttca agaccttctc atggagagtg tgaatttttc ccccgccaat
300

ctctctagca ctggttccag gtatctgaat gctttggttg acagtgcggt ggcccttgaa
360

acaaaggata cctcgctagc tagttttatc cctgcagtga atgatttgac ctctgatctc
420

tttcgtacca aatccaaaag tgaagaaatc aagattgaac tggaaaaact tgaaaaaaat
480

ttaactgcaa cttttagtatt agaaaaatgt ctacaagagg atgtcaagaa agcagagttg
540

catctgtcta cagaaagggc caaagttgat aatcgtcgtc agaacatgga ctttctaaaa
600

gcaaagtcag aggaattcag atttggaatc aaggctgcag aggagcaact ttcagccaga
660

ggcatggatg cttctctgtc tcatcagtcc ttagtagcac tatcagagaa actggcaaga
720

ttaaagcaac agactatacc tttgaagaaa aaattggagt cctatttaga cttaatgccg
780

aatccgtctc ttgctcaagt gaaaattgaa gaagcaaagc gagaactaga tagcattgaa
840

gctgaactta caagaagagt agacatgatg gaactgtgac aaaagccaaa taaacatcct
900

tttccctaac aaagtaaatt gaataggact ttacagagtt cttttttcctc ttggcatttc
960

ctaataacaa aactttctgt gttcttagat tacagaatat cataattgat agaatatggt
1020
```

ttcttactgt gtgttgcatt tttgtgccca aatacatagt tttcatatta aaaagccttt
1080
tctcttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1130

<210> 6172
<211> 292
<212> PRT
<213> Homo sapiens

<400> 6172
Xaa Pro Leu Gly Val Pro Ser Lys Val Ala Gly Ala Ala Ala Met Glu
1   5   10   15
Pro Gln Glu Glu Arg Glu Thr Gln Val Ala Ala Trp Leu Lys Lys Ile
            20   25   30
Phe Gly Asp His Pro Ile Pro Gln Tyr Glu Val Asn Pro Arg Thr Thr
        35   40   45
Glu Ile Leu His His Leu Ser Glu Arg Asn Arg Val Arg Asp Arg Asp
    50   55   60
Val Tyr Leu Val Ile Glu Asp Leu Lys Gln Lys Ala Ser Glu Tyr Glu
65   70   75   80
Ser Glu Ala Lys Tyr Leu Gln Asp Leu Leu Met Glu Ser Val Asn Phe
                85   90   95
Ser Pro Ala Asn Leu Ser Ser Thr Gly Ser Arg Tyr Leu Asn Ala Leu
            100   105   110
Val Asp Ser Ala Val Ala Leu Glu Thr Lys Asp Thr Ser Leu Ala Ser
        115   120   125
Phe Ile Pro Ala Val Asn Asp Leu Thr Ser Asp Leu Phe Arg Thr Lys
        130   135   140
Ser Lys Ser Glu Glu Ile Lys Ile Glu Leu Glu Lys Leu Glu Lys Asn
145   150   155   160
Leu Thr Ala Thr Leu Val Leu Glu Lys Cys Leu Gln Glu Asp Val Lys
                165   170   175
Lys Ala Glu Leu His Leu Ser Thr Glu Arg Ala Lys Val Asp Asn Arg
            180   185   190
Arg Gln Asn Met Asp Phe Leu Lys Ala Lys Ser Glu Glu Phe Arg Phe
            195   200   205
Gly Ile Lys Ala Ala Glu Glu Gln Leu Ser Ala Arg Gly Met Asp Ala
        210   215   220
Ser Leu Ser His Gln Ser Leu Val Ala Leu Ser Glu Lys Leu Ala Arg
225   230   235   240
Leu Lys Gln Gln Thr Ile Pro Leu Lys Lys Lys Leu Glu Ser Tyr Leu
                245   250   255
Asp Leu Met Pro Asn Pro Ser Leu Ala Gln Val Lys Ile Glu Glu Ala
            260   265   270
Lys Arg Glu Leu Asp Ser Ile Glu Ala Glu Leu Thr Arg Arg Val Asp
        275   280   285
Met Met Glu Leu
        290

<210> 6173
<211> 1483
<212> DNA
<213> Homo sapiens

<400> 6173

agagagagag actagttctc tcttactcta ggcctttcgg tttgcgcgac ggggcaggaa
60
agcgtgcgtg cggctaagag agtgggcgct ctcgcggcgc tgacgatgga agaactggag
120
caaggcctgt tgatgcagcc atgggcgtgg ctacagcttg cagagaactc cctcttggcc
180
aaggttttta tcaccaagca gggctatgcc ttgttggttt cagatcttca acaggtgtgg
240
catgaacagg tggacactag tgtggtcagc cagcgagcca aggagctgaa caagcggctc
300
actgctcctc ctgcagcttt cctctgtcat ttggataatc tccttcgccc attgttgaag
360
gacgctgctc accctagcga agctaccttc tcctgtgatt gtgtggcaga tgcactgatt
420
ctacgggtgc gaagtgagct ctctggcctc cccttctatt ggaatttcca ctgcatgcta
480
gctagtcctt ccctggtctc ccaacatttg attcgtcctc tgatgggcat gagtctggca
540
ttacagtgcc aagtgaggga gctagcaacg ttacttcata tgaaagacct agagatccaa
600
gactaccagg agagtggggc tacgctgatt cgagatcgat tgaagacaga accatttgaa
660
gaaaattcct tcttggaaca atttatgata gagaaactgc cagaggcatg cagcattggt
720
gatggaaagc cctttgtcat gaatctgcag gatctgtata tggcagtcac cacacaagag
780
gtccaagtgg gacagaagca tcaaggcgct ggagatcctc atacctcaaa cagtgcttcc
840
ctgcaaggaa tcgatagcca atgtgtaaac cagccagaac aactggtctc ctcagcccca
900
accctctcag cacctgagaa agagtccacg ggtacttcag gccctctgca gagacctcag
960
ctgtcaaagg tcaagaggaa gaatccaagg ggtctcttca gttaatctgt tgtggcctca
1020
gctgctgagg atggacttgg agaatagctt ccaagcttca ccttgaaaga agcttacatg
1080
gcagcaatat ttctaaaata gtgatacagt cagaggcctc ctgtaagggc gagagaactg
1140
aagttgatgt tgacaggccc acagggaatt ggccttccct gttcaagtgg aagccagtct
1200
ctgagaatcc cgtgctctcc tctcttttgg tggaggttct gtaggttcag gtttctacca
1260
tggactttag gtatataggg caagtcagca agaaagcacc acacactcag gaagccttgt
1320
ctacctttcc ctagcgtctc tagccagcca gccccagata ctcctcagag acccacttct
1380
ctcttttgca tggaataaaa agcactcaca gtccctgctt ttgggattaa aaaacaaaaa
1440
gaaaaaaaaa aaaaaaaaaa aaaaaaaaat cctcatgccg aat
1483

<210> 6174

<211> 299
<212> PRT
<213> Homo sapiens

<400> 6174
```
Met Glu Glu Leu Glu Gln Gly Leu Leu Met Gln Pro Trp Ala Trp Leu
  1               5                  10                  15
Gln Leu Ala Glu Asn Ser Leu Leu Ala Lys Val Phe Ile Thr Lys Gln
             20                  25                  30
Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
          35                  40                  45
Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
       50                  55                  60
Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
65                  70                  75                  80
Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
             85                  90                  95
Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
            100                 105                 110
Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
         115                 120                 125
Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
         130                 135                 140
Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
145                 150                 155                 160
Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
                165                 170                 175
Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
             180                 185                 190
Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
         195                 200                 205
Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
         210                 215                 220
Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
225                 230                 235                 240
Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
             245                 250                 255
Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
             260                 265                 270
Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
             275                 280                 285
Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
         290                 295
```

<210> 6175
<211> 349
<212> DNA
<213> Homo sapiens

<400> 6175
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acgcgtttgc cgggagatgc ggccgcttcg tcctctgcag ttaagaagct gggcgcgtcg
60
aggactggga tttcaaatat gcgtgcatta gagaatgact ttttcaattc tcccccaaga
120
```

```
aaaactgttc agtttggtgg aactgtgaca gaagtcttgc tgaagtacaa aaagggtgaa
180
acaaatgact ttgagttgtt gaagaaccag ctgttagatc cagacataaa gagattgcct
240
tggttgaata gaagtcaaac agtagtggaa gagtatttgg cttttcttgg taatcttgta
300
tcagcacaga ctgttttcct cagaccgtgt ctcagcatga ttgcttccc
349
```

```
<210> 6176
<211> 90
<212> PRT
<213> Homo sapiens
```

```
<400> 6176
Met Arg Ala Leu Glu Asn Asp Phe Phe Asn Ser Pro Pro Arg Lys Thr
1               5                   10                  15
Val Gln Phe Gly Gly Thr Val Thr Glu Val Leu Leu Lys Tyr Lys Lys
            20                  25                  30
Gly Glu Thr Asn Asp Phe Glu Leu Leu Lys Asn Gln Leu Leu Asp Pro
        35                  40                  45
Asp Ile Lys Arg Leu Pro Trp Leu Asn Arg Ser Gln Thr Val Val Glu
    50                  55                  60
Glu Tyr Leu Ala Phe Leu Gly Asn Leu Val Ser Ala Gln Thr Val Phe
65                  70                  75                  80
Leu Arg Pro Cys Leu Ser Met Ile Ala Ser
                85                  90
```

```
<210> 6177
<211> 1536
<212> DNA
<213> Homo sapiens
```

```
<400> 6177
cggcccaacc atggcgtcct ccgcggccgg ctgcgtggtg atcgttggca gaattaaaac
60
tctgtaccca ttgaacaaca gctgctcatt tcccccagcc ccagcccctg gcatccaccc
120
ttctagcttt ctgtctctat gggtacctca gtggagtcat tgggcgaatg ggccatgctg
180
tttgccagtg gaggcttcca ggtgaaactc tatgacattg agcaacagca gataaggaac
240
gccctggaaa acatcagaaa ggagatgaag ttgctggagc aggcaggttc tctgaaaggc
300
tccctgagtg tggaagagca gctgtcactc atcagtggtt gtcccaatat ccaagaagca
360
gtagagggtg ccatgcacat tcaggaatgt gttccagaag atctagaact gaagaagaag
420
atttttgctc agttagattc catcattgat gatcgagtga tcttaagcag ttccacttct
480
tgtctcatgc cttccaagtt gtttgctggc ttggtccatg tgaagcaatg catcgtggct
540
catcctgtga atccgccata ctacatcccg ctggttgagc tggtccccca cccggagacg
600
```

```
gcccctacga cagtggacag aacccacgcc ctgatgaaga agattgganc agtgccccat
660
gcgagtccag aaggaggtgg ccggcttcgt tctgaaccgc ctgcaatatg caatcatcag
720
cgaggcctgg cggctagtgg aggaaggaat ncgtgtctcc tagtgacctg gnaccttgtc
780
atgtcagaag ggttgggcat gcggtatgca ttcattggac ccctggaaac catgcatctc
840
aatgcagaag gtatgttaag ctactgcgac agatacagcg aaggcataaa acatgtccta
900
cagactttg gacccattcc agagtttcc agggccactg ctgagaaggt taaccaggac
960
atgtgcatga aggtccctga tgacccggag cacttagctg ccaggaggca gtggagggac
1020
gagtgcctca tgagactcgc caagttgaag agtcaagtgc agccccagtg aatttcttgt
1080
aatgcagctt ccactcctct cattggaggc cctatttggg aacactgcaa gcccttaatc
1140
agccctctgt gacataggta gcagcccacg gagatcctaa gctggctgtc ttgtgtgcag
1200
cctgagtggg gtggtgcagg ccggtagtct gcccgtcact ttggatcata gccctgggcc
1260
tggcggcaca gcagcacttg cgttctcggg gctgtcgatt cctgccacc tgggcagata
1320
acctggagat ttccaccttt tcttttcagc ttgattgcat ttgactatat tttacagcca
1380
gtgattgtag tttcatgtta atatgtggca aaatattttt gtaattattt tctaatccct
1440
ttctgagtac tctggggccc tgcatttatg aggcacctac cttcattttg ctaacgctta
1500
ttctgaataa aagttttga ttccttaaaa aaaaaa
1536
```

```
<210> 6178
<211> 310
<212> PRT
<213> Homo sapiens

<400> 6178
Met Gly Thr Ser Val Glu Ser Leu Gly Glu Trp Ala Met Leu Phe Ala
1               5                   10                  15
Ser Gly Gly Phe Gln Val Lys Leu Tyr Asp Ile Glu Gln Gln Gln Ile
            20                  25                  30
Arg Asn Ala Leu Glu Asn Ile Arg Lys Glu Met Lys Leu Leu Glu Gln
        35                  40                  45
Ala Gly Ser Leu Lys Gly Ser Leu Ser Val Glu Glu Gln Leu Ser Leu
    50                  55                  60
Ile Ser Gly Cys Pro Asn Ile Gln Glu Ala Val Glu Gly Ala Met His
65                  70                  75                  80
Ile Gln Glu Cys Val Pro Glu Asp Leu Glu Leu Lys Lys Lys Ile Phe
                85                  90                  95
Ala Gln Leu Asp Ser Ile Ile Asp Asp Arg Val Ile Leu Ser Ser Ser
            100                 105                 110
Thr Ser Cys Leu Met Pro Ser Lys Leu Phe Ala Gly Leu Val His Val
```

5357

```
          115                     120                     125
Lys Gln Cys Ile Val Ala His Pro Val Asn Pro Pro Tyr Tyr Ile Pro
      130                     135                     140
Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp
145                     150                     155                     160
Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser
                  165                     170                     175
Pro Glu Gly Gly Gly Arg Leu Arg Ser Glu Pro Pro Ala Ile Cys Asn
                  180                     185                     190
His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu
          195                     200                     205
Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala
      210                     215                     220
Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu
225                     230                     235                     240
Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr
                  245                     250                     255
Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn
              260                     265                     270
Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala
          275                     280                     285
Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys
      290                     295                     300
Ser Gln Val Gln Pro Gln
305                     310
```

<210> 6179
<211> 2940
<212> DNA
<213> Homo sapiens

<400> 6179

```
nnctgcaggt ggcgcgggag gctacgcgcg gggcgggtgc tgcttgctgc aggctctggg
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gagtcgccat gcctacaaca cagcagtccc ctcaggatga gcaggaaaag ctcttggatg
120
aagccataca ggctgtgaag gtccagtcat tccaaatgaa gagatgcctg gacaaaaaca
180
agcttatgga tgctctaaaa catgcttcta atatgcttgg tgaactccgg acttctatgt
240
tatcaccaaa gagttactat gaactttata tggccatttc tgatgaactg cactacttgg
300
aggntctacc tgacagatga gtttgctaaa ggaaggaaag tggcagatct ctacgaactt
360
gtacagtatg ctggaaacat tatcccaagg ctttaccttt tgatcacagt tggagttgta
420
tatgtcaagt catttcctca gtccaggaag gatattttga aagatttggt agaaatgtgc
480
cgtggtgtgc aacatccctt gaggggtctg tttcttcgaa attaccttct tcagtgtacc
540
agaaatatct tacctgatga aggagagcca acagatgaag aaacaactgg tgacatcagt
600
gattccatgg attttgtact gctcaacttt gcagaaatga acaagctctg ggtgcgaatg
660
```

```
cagcatcagg gacatagccg agatagagaa aaaagagaac gagaaagaca agaactgaga
720
attttagtgg gaacaaattt ggtgcgcctc agtnncagtt ggaggtgtaa atgtggaacg
780
ttacaacaga ttgttttgac tggcatattg gagcaagttg taaactgtag ggatgctttg
840
gctcaagaat atctcatgga gtgtattatt caggttttcc ctgatgaatt tcacctccag
900
actttgaatc cttttcttcg ggcctgtgct gagttacacc agaatgtaaa tgtgaagaac
960
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1020
atcccagcgg atattaaact ttttgatata ttttcacagc aggtggctac agtgatacag
1080
tctagacaag acatgccttc agaggatgtt gtatctttac aagtctctct gattaatctt
1140
gccatgaaat gttaccctga tcgtgtggac tatgttgata aagttctaga aacaacagtg
1200
gagatattca ataagctcaa ccttgaacat attgctacca gtagtgcagt ttcaaaggaa
1260
ctcaccagac ttttgaaaat accagttgac acttacaaca atattttaac agtcttgaaa
1320
ttaaaacatt ttcacccact ctttgagtac tttgactacg agtccagaaa gagcatgagt
1380
tgttatgtgc ttagtaatgt tctggattat aacacagaaa ttgtctctca agaccaggtg
1440
gattccataa tgaatttggt atccacgttg attcaagatc agccagatca acctgtagaa
1500
gaccctgatc cagaagattt tgctgatgag cagagccttg tgggccgctt cattcatctg
1560
ctgcgctctg aggaccctga ccagcagtac ttgattttga acacagcacg aaaacatttt
1620
ggagctggtg gaaatcagcg gattcgcttc acactgccac ctttggtatt tgcagcttac
1680
cagctggctt ttcgatataa agagaattct aagtggatga caaatgggaa aagaaatgcc
1740
agaagatttt ttcatttgcc cnaccagact atcagtgctt tgatcaaagc agagctggca
1800
gaattgccct taagactttt tcttcaagga gcactagctg ctggggaaat tggttttgaa
1860
aatcatgaga cagtcgcata tgaattcatg tcccaggcat tttctctgta tgaagatgaa
1920
atcagcgatt ccaaagcaca gctagctgcc atcaccttga tcattggcac ttttgaaagg
1980
atgaagtgct tcagtgaaga gaatcatgaa cctctgagga ctcagtgtgc ccttgctgca
2040
tccaaacttc taaagaaacc tgatcagggc cgagctgagc acctgtgcac atctctttgg
2100
tctggcagaa acacggacaa aaatggggag gagcttcacg gaggcaagag ggtaatggag
2160
tgcctaaaaa aagctctaaa aatagcaaat cagtgcatgg acccctctct acaagtgcag
2220
cttttttatag aaattctgaa cagatatatc tatttttatg aaaaggaaaa tgatgcggta
2280
```

```
acaattcagg ttttaaacca gcttatccaa aagattcgag aagacctccc gaatcttgaa
2340
tccagtgaag aaacagagca gattaacaaa cattttcata acacactgga gcatttgcgc
2400
ttgcggcggg aatcaccaga atccgagggg ccaatttatg aaggtctcat cctttaaaaa
2460
ggaaatagct caccatactc ctttccatgt acatccagtg agggttttat tacgctaggt
2520
ttcccttcca tagattgtgc ctttcagaaa tgctgaggta ggtttcccat ttcttacctg
2580
tgatgtgttt tacccagcac ctccggacac tcaccttcag gaccttaata aaattattca
2640
cttggtaagt gttcaagtct ttctgatcac cccaagtagc atgactgatc tgcaattttt
2700
agagcttttt ttaggcactc cattaccctc ttgcctccgt gaagctcctc cccattttg
2760
tccgtgtttc tgccagacca gaagagatgt gcacaggtgc tcacagctcg gccctgatca
2820
ggtttcttta gaagtttgga tgcagcaagg gcacactgag tcctcagagg ttcatgattc
2880
tcttcactga agcacttcat cctttcaaaa gtgccaatga tcaaggtgat ggcagctagc
2940
```

<210> 6180
<211> 751
<212> PRT
<213> Homo sapiens

<400> 6180

```
Met Leu Leu Ile Cys Leu Val Asn Ser Gly Leu Leu Cys Tyr His Gln
1               5                   10                  15
Arg Val Thr Met Asn Phe Ile Trp Pro Phe Leu Met Asn Cys Thr Thr
            20                  25                  30
Trp Arg Xaa Tyr Leu Thr Asp Glu Phe Ala Lys Gly Arg Lys Val Ala
        35                  40                  45
Asp Leu Tyr Glu Leu Val Gln Tyr Ala Gly Asn Ile Ile Pro Arg Leu
    50                  55                  60
Tyr Leu Leu Ile Thr Val Gly Val Val Tyr Val Lys Ser Phe Pro Gln
65                  70                  75                  80
Ser Arg Lys Asp Ile Leu Lys Asp Leu Val Glu Met Cys Arg Gly Val
                85                  90                  95
Gln His Pro Leu Arg Gly Leu Phe Leu Arg Asn Tyr Leu Leu Gln Cys
            100                 105                 110
Thr Arg Asn Ile Leu Pro Asp Glu Gly Glu Pro Thr Asp Glu Glu Thr
            115                 120                 125
Thr Gly Asp Ile Ser Asp Ser Met Asp Phe Val Leu Leu Asn Phe Ala
    130                 135                 140
Glu Met Asn Lys Leu Trp Val Arg Met Gln His Gln Gly His Ser Arg
145                 150                 155                 160
Asp Arg Glu Lys Arg Glu Arg Glu Arg Gln Glu Leu Arg Ile Leu Val
                165                 170                 175
Gly Thr Asn Leu Val Arg Leu Ser Xaa Ser Trp Arg Cys Lys Cys Gly
            180                 185                 190
Thr Leu Gln Gln Ile Val Leu Thr Gly Ile Leu Glu Gln Val Val Asn
```

```
              195                     200                    205
Cys Arg Asp Ala Leu Ala Gln Glu Tyr Leu Met Glu Cys Ile Ile Gln
    210                     215                    220
Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg
225                     230                     235                    240
Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile
              245                     250                    255
Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro
              260                     265                    270
Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val
              275                     280                    285
Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val
     290                     295                    300
Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp
305                     310                     315                    320
Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe
              325                     330                    335
Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys
              340                     345                    350
Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile
              355                     360                    365
Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe
     370                     375                    380
Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val
385                     390                     395                    400
Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile
              405                     410                    415
Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val
              420                     425                    430
Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly
              435                     440                    445
Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu
     450                     455                    460
Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg
465                     470                     475                    480
Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala
              485                     490                    495
Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn
              500                     505                    510
Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile
              515                     520                    525
Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala
     530                     535                    540
Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr
545                     550                     555                    560
Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp
              565                     570                    575
Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu
              580                     585                    590
Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln
              595                     600                    605
Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg
     610                     615                    620
Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys
```

```
625                    630               635                 640
Asn Gly Glu Glu Leu His Gly Gly Lys Arg Val Met Glu Cys Leu Lys
                    645               650               655
Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val
                660               665               670
Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys
            675               680               685
Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys
        690               695               700
Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln
705               710               715               720
Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg
                725               730               735
Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu
            740               745               750
```

<210> 6181
<211> 1135
<212> DNA
<213> Homo sapiens

<400> 6181
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gccaagcgct actcctggtc cggcatgggc cgcatccaca agggcatccg cgagcagggc
60
cggtacctca acagccggcc ctccatccag aagcccgagg tcttcttcct gcccgacctg
120
cccaccacgc cctatttctc ccgggacgca cagaaacatg atgtggaagt gctggaacgg
180
aacttccaga ccatcctgtg tgagtttgag accctctaca agctttctc aaactgcagc
240
ctcccgcaag gatggaaaat gaacagcacc cccagcgggg agtggttcac cttttacttg
300
gtcaatcagg gggtttgtgt tcccaggaac tgtaggaagt gcccacggac gtaccgcttg
360
ctcggaagcc ttcggacctg tattgggaac aatgttttg ggaacgcgtg catctctgtg
420
ctgagccctg ggactgtgat aacggagcac tatggaccca ccaacatccg catccgatgc
480
catttaggtc tgaaaactcc aaatggctgt gagctggtgg tgggggagga gccccagtgc
540
tgggcagaag ggcgctgcct tctctttgat gactctttcc tgcatgctgc gttccatgaa
600
ggttcagcag aggatggccc acgggtggtt ttcatggtgg atttgtggca tccaaacgtc
660
gcagcggccg aacggcaggc tcttgatttc atctttgctc cgggacgatg agagtatttc
720
ccatgctgga gtcggcgaga agggccgagg cggggcctgg gcagactgtg gtccggtcca
780
gtccctaccg gtgttgtttc catgctcaga aacctgcctc agcggaaagc tcttatttgg
840
gattttatat catgtcgggt ccctctttcc cttggttatt gtaaatggaa actttcggc
900
ttgtatttcc ttagattttt tttttttcct tccaatcatt tgcttcagag actcctttct
960
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ggcctaacag cgcattcctt tgattggtcc ttgagtgacc agagacttag tgcccttgta
1020
agtctgtctt ctgttgctac ttgtttttt cagtgctctg aaatagagta actaaatggt
1080
tatttgtctg aatataataa tgtaaaactt cttgtggtca tcttaaaaaa aaaaa
1135

<210> 6182
<211> 236
<212> PRT
<213> Homo sapiens

<400> 6182
Ala Lys Arg Tyr Ser Trp Ser Gly Met Gly Arg Ile His Lys Gly Ile
 1   5   10   15
Arg Glu Gln Gly Arg Tyr Leu Asn Ser Arg Pro Ser Ile Gln Lys Pro
                20   25   30
Glu Val Phe Phe Leu Pro Asp Leu Pro Thr Thr Pro Tyr Phe Ser Arg
                35   40   45
Asp Ala Gln Lys His Asp Val Glu Val Leu Glu Arg Asn Phe Gln Thr
        50   55   60
Ile Leu Cys Glu Phe Glu Thr Leu Tyr Lys Ala Phe Ser Asn Cys Ser
65   70   75   80
Leu Pro Gln Gly Trp Lys Met Asn Ser Thr Pro Ser Gly Glu Trp Phe
                85   90   95
Thr Phe Tyr Leu Val Asn Gln Gly Val Cys Val Pro Arg Asn Cys Arg
                100   105   110
Lys Cys Pro Arg Thr Tyr Arg Leu Leu Gly Ser Leu Arg Thr Cys Ile
            115   120   125
Gly Asn Asn Val Phe Gly Asn Ala Cys Ile Ser Val Leu Ser Pro Gly
        130   135   140
Thr Val Ile Thr Glu His Tyr Gly Pro Thr Asn Ile Arg Ile Arg Cys
145   150   155   160
His Leu Gly Leu Lys Thr Pro Asn Gly Cys Glu Leu Val Val Gly Gly
                165   170   175
Glu Pro Gln Cys Trp Ala Glu Gly Arg Cys Leu Leu Phe Asp Asp Ser
            180   185   190
Phe Leu His Ala Ala Phe His Glu Gly Ser Ala Glu Asp Gly Pro Arg
        195   200   205
Val Val Phe Met Val Asp Leu Trp His Pro Asn Val Ala Ala Ala Glu
        210   215   220
Arg Gln Ala Leu Asp Phe Ile Phe Ala Pro Gly Arg
225   230   235

<210> 6183
<211> 2530
<212> DNA
<213> Homo sapiens

<400> 6183
acgcgtcggt cgttggggcg ttgagcaagt gcgaccccgg agtcatttgg gctggggttg
60
gaggattagc atctgccatt gactcgcatt aaagggccca gcgtctcgcg tgagaggttg
120

aggttgtgtt gcgggggtcg ggtagctgta ggtcttagaa atggcatcaa aggtggcctt
180
ggcgaagttg cccagggtgg cagtgcagcc ccgggctgag gtgtagcagt catcgatacc
240
agccatcatg agcagcttct taggcacagg tgcggagacg atgccagtgc ccctgggtgc
300
agggatgagg cgtaccagca cagagccgca gcggcctgtc acctggtgag ggaaggagtc
360
aggagacggg ggcccgaggg agcctgcccc acggcaggcc catcacctgc caccagccta
420
ccttgcaagg gacagtgtgg ggcttgccga tcttgttccc ccagtagcct ctgcgcacgg
480
ggacgatgga gagcttggcc aggatgatgg ccccacggat ggcggtggcc acctccttgg
540
agcacttaac acccagaccg acgtggccat tgtagtcccc gatagcaaca aatgccttga
600
acctggtgcg ctggccggca cgggtctgct tctgcactgg cataatcttc aaaacctcat
660
ccttgagaga ggcccccagg aaaaagtcaa tgatctctga ttccttaatg ggcagagaga
720
agagatagat ctcctccagg gacttgatct tcatgtcctt gaccaagcgg cccaacttgg
780
tgacgggcat ccactcctta tctccggcct tgcctccgcg agctccgcgg cctcggcccc
840
ggccccgtcc acggccgcga ccccggccct ggtggccctg ggatggggaa ccgcggtggc
900
ttccgcggag gtttcggcag tggcatccgg ggccggggtc gcggccgtgg acggggccgg
960
ggccgaggcc gcggagctcg cggaggcaag gccgaggata aggagtggat gcccgtcacc
1020
aagttgggcc gcttggtcaa ggacatgaag atcaagtccc tggaggagat ctatctcttc
1080
tccctgccca ttaaggaatc agagatcatt gatttcttcc tggggccctc tctcaaggat
1140
gaggttttga agattatgcc agtgcagaag cagaccgtg ccggccagcg caccaggttc
1200
aaggcatttg ttgctatcgg ggactacaat ggccacgtcg gtctgggtgt taagtgctcc
1260
aaggaggtgg ccaccgccat ccgtggggcc atcatcctgg ccaagctctc catcgtcccc
1320
gtgcgcagag gctactgggg gaacaagatc ggcaagcccc acactgtccc ttgcaaggtg
1380
acaggccgct gcggctctgt gctggtacgc ctcatccctg cacccagggg cactggcatc
1440
gtctccgcac ctgtgcctaa gaagctgctc atgatggctg gtatcgatga ctgctacacc
1500
tcagcccggg gctgcactgc caccctgggc aacttcgcca aggccacctt tgatgccatt
1560
tctaagacct acagctacct gacccccgac ctctggaagg agactgtatt caccaagtct
1620
ccctatcagg agttcactga ccacctcgtc aagacccaca ccagagtctc cgtgcagcgg
1680
actcaggctc cagctgtggc tacaacatag ggttttata caagaaaaat aaagtgaatt
1740

```
aagctgtcac cccaccatgg agaaaagagt cttttggttc tttttaacat aagtgattag
1800
tttaagagta tgctgaggag ccactgggct taaagaagga tgtaaataag acccaaatac
1860
atagggacca ggcgctgctt tctcatgttc acaaaagcag tcctccacca ctgaactcca
1920
ttctctcagg gggctcaatg aaggctaacc aatccgatgc atgtgtaggt aacagtccca
1980
tggactggca cttgtaaaca gccaatgcca aacccatcag gttcccaatg agatagacca
2040
aaccctgaag aaacttctgg cttgaacttt ctaacatctt gaaagtggct gaaatggcca
2100
taagtgcctg aatgggtcgc caggccatca tacacaccat catagtaggg aagatggaga
2160
tagtattgcc tgccatgtac atgatgaaga gattcatggg aatctgtttg aggggaccca
2220
aggcgatgtc ccagcagcgc ttctccacca ggatccggtc tgtctcttgc acgctggtat
2280
caggcacttg cttgtccaag taaccgactg ggtagagcga gtctccctgg ccactgcccc
2340
ggtcacttcg acccctgctg cctcctccag gcccgcttag ctcaatggcc cacttgaagc
2400
gccggcctcg gttagccacc aggcccccct gggccgtcat ggcaacagct gcgtcctata
2460
gcctcgatgc ttctcagtcc aaagcgtact ccacaacagg cccaccagcg ttctccgctt
2520
tgtctcaccc
2530
```

```
<210> 6184
<211> 308
<212> PRT
<213> Homo sapiens
```

```
<400> 6184
Arg Ala Ser Thr Pro Tyr Leu Arg Pro Cys Leu Arg Glu Leu Arg Gly
 1               5                  10                  15
Leu Gly Pro Gly Pro Val His Gly Arg Asp Pro Gly Pro Gly Gly Pro
            20                  25                  30
Gly Met Gly Asn Arg Gly Gly Phe Arg Gly Gly Phe Gly Ser Gly Ile
        35                  40                  45
Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly
    50                  55                  60
Ala Arg Gly Gly Lys Ala Glu Asp Lys Glu Trp Met Pro Val Thr Lys
65                  70                  75                  80
Leu Gly Arg Leu Val Lys Asp Met Lys Ile Lys Ser Leu Glu Glu Ile
            85                  90                  95
Tyr Leu Phe Ser Leu Pro Ile Lys Glu Ser Glu Ile Ile Asp Phe Phe
            100                 105                 110
Leu Gly Ala Ser Leu Lys Asp Glu Val Leu Lys Ile Met Pro Val Gln
        115                 120                 125
Lys Gln Thr Arg Ala Gly Gln Arg Thr Arg Phe Lys Ala Phe Val Ala
    130                 135                 140
Ile Gly Asp Tyr Asn Gly His Val Gly Leu Gly Val Lys Cys Ser Lys
```

```
        145                 150                 155                 160
        Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
                        165                 170                 175
        Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
                        180                 185                 190
        His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
                        195                 200                 205
        Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
                210                 215                 220
        Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
        225                 230                 235                 240
        Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
                        245                 250                 255
        Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
                        260                 265                 270
        Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
                        275                 280                 285
        Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
                290                 295                 300
        Val Ala Thr Thr
        305
```

```
<210> 6185
<211> 1231
<212> DNA
<213> Homo sapiens


<400> 6185
cacagcttgt tcctaggaag ggcttagcaa acgggggtgg ttgtccttct tggaagccac
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atttgtttgc ctggtgagtg gtggagggca ctgctaggcc tgctagggct gacacggcca
120
gagtcagatg acctcatctc acatccagca ggtgaaatgc agtctttgat cccttgaaac
180
ccaccctcta ggaccaaggt cactgcagta ttggatagga cctcagggag ttagcagggg
240
gctcatggtt aagagtgtga actacagctt agacctacag ggttccctgc ccagctcctc
300
cacaaaccag ctgtgcaacc ctagacaagt gagttaatgt ccctgggcct cagtttcttc
360
ttagtaaaat gtgtgtagcc atagagggct gttatgagga ttcagtcaaa tgacacatga
420
tgtcttgggc acacctggcg tggattatgg cgcctgtagg agcaggaggg cttcctggag
480
gaggggcta gttgaacaga gtctagaaag tatagattgg gaagagcact ctgggaggca
540
ggatcaccat gtgcaaaggc tcagagaatg ccacccacta cctcctggaa atcaagggga
600
ttctgtgtgt ccaagggcat tggtggtctc taggcccccg acctgtgtct gggaggtgtc
660
aaggggaagc cagatccgag gcccacactt gcatgttttc aggtgaggtc cagagatata
720
tccagagagg agtggaaggg ctcggagacc tacagcccca atactgcata tggtgtggac
780
```

ttcctggtgc ccgtgatggg ctatatctgc cgcatctgcc acaagttcta tcacagcaac
840
tcaggggcac agctctccca ctgcaagtcc ctgggccact ttgagaacct gcagaaatac
900
aaggcggcca agaaccccag ccccaccacc cgacctgtga gccgccggtg cgcaatcaac
960
gcccggaacg ctttgacagc cctgttcacc tccagcggcc gcccaccctc ccagcccaac
1020
acccaggaca aaacacccag caaggtgacg gctcgaccct cccagccccc actacctcgg
1080
cgctcaaccc gcctcaaaac ctgatagagg gacctccctg tccctggcct gcctgggtcc
1140
agatctgcta atgcttttta ggagtctgcc tggaaacttt gacatggttc atgttttttac
1200
tcaaaatcca ataaaacaag gtaagtttgg c
1231

<210> 6186
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6186
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
 1   5   10   15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20   25   30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
        35   40   45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50   55   60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65   70   75   80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85   90   95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100   105   110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115   120   125
Thr Arg Leu Lys Thr
    130

<210> 6187
<211> 909
<212> DNA
<213> Homo sapiens

<400> 6187
nagtcctccc aaagtacttg tgtccgggtg gtggactgga ttcgctgcgg agccctggaa
60
gctgcctttc cttctccctg tgcttaacca gaggtgccca tgggttggac aatgaggctg
120
gtcacagcag cactgttact gggtctcatg atggtggtca ctggagacga ggatgagaac
180

```
agcccgtgtg cccatgaggc cctcttggac gaggacaccc tcttttgcca gggccttgaa
240
gttttctacc cagagttggg gaacattggc tgcaaggttg ttcctgattg taacaactac
300
agacagaaga tcacctcctg gatggagccg atagtcaagt tcccggggggc cgtgtacggc
360
gcaacctata tcctggtgat ggtggatcca gatgcccccta gcagagcaga acccagacag
420
agattctgga gacattggct ggtaacagat atcaagggcg ccgacctgaa gaaagggaag
480
attcagggcc aggagttatc agcctaccag gctccctccc caccggcaca cagtggcttc
540
catcgctacc agttctttgt ctatcttcag gaaggaaaag tcatctctct ccttcccaag
600
gaaaacaaaa ctcgaggctc ttggaaaatg gacagatttc tgaaccgttt ccacctgggc
660
gaacctgaag caagcaccca gttcatgacc cagaactacc aggactcacc aaccctccag
720
gctcccagag aaagggccag cgagcccaag cacaaaaacc aggcggagat agctgcctgc
780
tagatagccg gctttgccat ccgggcatgt ggccacactg cccaccaccg acgatgtggg
840
tatggaaccc cctctggata cagaacccct tctttttccaa attaaaaaaa aaaatcatcc
900
agggcaaaa
909
```

```
<210> 6188
<211> 227
<212> PRT
<213> Homo sapiens
```

```
<400> 6188
Met Gly Trp Thr Met Arg Leu Val Thr Ala Ala Leu Leu Leu Gly Leu
 1               5                  10                  15
Met Met Val Val Thr Gly Asp Glu Asp Glu Asn Ser Pro Cys Ala His
                20                  25                  30
Glu Ala Leu Leu Asp Glu Asp Thr Leu Phe Cys Gln Gly Leu Glu Val
            35                  40                  45
Phe Tyr Pro Glu Leu Gly Asn Ile Gly Cys Lys Val Val Pro Asp Cys
        50                  55                  60
Asn Asn Tyr Arg Gln Lys Ile Thr Ser Trp Met Glu Pro Ile Val Lys
65                  70                  75                  80
Phe Pro Gly Ala Val Tyr Gly Ala Thr Tyr Ile Leu Val Met Val Asp
                85                  90                  95
Pro Asp Ala Pro Ser Arg Ala Glu Pro Arg Gln Arg Phe Trp Arg His
               100                 105                 110
Trp Leu Val Thr Asp Ile Lys Gly Ala Asp Leu Lys Lys Gly Lys Ile
           115                 120                 125
Gln Gly Gln Glu Leu Ser Ala Tyr Gln Ala Pro Ser Pro Pro Ala His
       130                 135                 140
Ser Gly Phe His Arg Tyr Gln Phe Phe Val Tyr Leu Gln Glu Gly Lys
145                 150                 155                 160
Val Ile Ser Leu Leu Pro Lys Glu Asn Lys Thr Arg Gly Ser Trp Lys
```

```
                    165                170                175
Met Asp Arg Phe Leu Asn Arg Phe His Leu Gly Glu Pro Glu Ala Ser
              180                185                190
Thr Gln Phe Met Thr Gln Asn Tyr Gln Asp Ser Pro Thr Leu Gln Ala
          195                200                205
Pro Arg Glu Arg Ala Ser Glu Pro Lys His Lys Asn Gln Ala Glu Ile
      210                215                220
Ala Ala Cys
225
```

<210> 6189
<211> 2761
<212> DNA
<213> Homo sapiens

<400> 6189

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ngccgcgctg gcattttctc ctggacaagg agagagtgcg gctgctgaga gccgagccca
60
gcaatcccga tcctctgagt cgtgaagaag ggaggcagcg aggggggttgg ggttggggcc
120
tgaggcaagc ccccaggctc cgctcttgcc agagggacag gagccatggc tcagaaaatg
180
gactgtggtg cgggcctcct cggcttccag gctgaggcct ccgtagaaga cagcgccttg
240
cttatgcaga ccttgatgga ggccatccag atctcagagg ctccacctac taaccaggcc
300
accgcagctg ctagtcccca gagttcacag ccccaactg ccaatgagat ggctgacatt
360
caggtttcag cagctgccgc taggcctaag tcagccttta aagtccagaa tgccaccaca
420
aaaggcccaa atggtgtcta tgatttctct caggctcata atgccaagga tgtgcccaac
480
acgcagccca aggcagcctt taagtcccaa aatgctaccc caaagggtcc aaatgctgcc
540
tatgattttt cccaggcagc aaccactggt gagttagctg ctaacaagtc tgagatggcc
600
ttcaaggccc agaatgccac tactaaagtg ggcccaaatg ccacctacaa tttctctcag
660
tctctcaatg ccaatgacct ggccaacagc aggcctaaga ccccttttcaa ggcttggaat
720
gataccacta aggccccaac agctgatacc cagacccaga atgtaaatca ggccaaaatg
780
gccacttccc aggctgacat agagaccgac ccaggtatct ctgaacctga cggtgcaact
840
gcacagacat cagcagatgg ttcccaggct cagaatctgg agtcccggac aataattcgg
900
ggcaagagga cccgcaagat taataacttg aatgttgaag agaacagcag tggggatcag
960
aggcgggccc cactggctgc agggacctgg aggtctgcac cagttccagt gaccactcag
1020
aacccacctg gcgcaccccc caatgtgctc tggcagacgc cattggcttg gcagaacccc
1080
tcaggctggc aaaaccagac agccaggcag accccaccag cacgtcagag ccctccagct
1140
```

```
aggcagaccc caccagcctg gcagacccag aacccagtcg cttggcagaa cccagtgatt
1200
tggccaaacc cagtaatctg gcagaaccca gtgatctggc caaaccccat tgtctggccc
1260
ggccctgttg tctggccgaa tccactggcc tggcagaatc cacctggatg gcagactcca
1320
cctggatggc agaccccacc gggctggcag ggtcctccag actggcaagg tcctcctgac
1380
tggccgctac cacccgactg gccactgcca cctgattggc cacttcccac tgactggcca
1440
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1500
ccctcgccta acctgcgccc ttctcccaac tcgcgtgcct cacagaaccc aggtgctgca
1560
cagccccgag atgtggccct tcttcaggaa agagcaaata agttggtcaa gtacttgatg
1620
cttaaggact acacaaaggt gcccatcaag cgctcagaaa tgctgagaga tatcatccgt
1680
gaatacactg atgtttatcc agaaatcatt gaacgtgcat gctttgtcct agagaagaaa
1740
tttgggattc aactgaaaga aattgacaaa gaagaacacc tgtatattct catcagtacc
1800
cccgagtccc tggctggcat actgggaacg accaaagaca cacccaagct cggtctcctc
1860
ttggtgattc tgggtgtcat cttcatgaat ggcaaccgtg ccagtgaggc tgtcctctgg
1920
gaggcactac gcaagatggg actgcgtcct ggggtgagac atcccctcct tggagatcta
1980
aggaaacttc tcacctatga gtttgtaaag cagaaatacc tggactacag acgagtgccc
2040
aacagcaacc ccccggagta tgagttcctc tggggcctcc gttcctacca tgagactagc
2100
aagatgaaag tgctgagatt cattgcagag gttcagaaaa gagaccctcg tgactggact
2160
gcacagttca tggaggctgc agatgaggcc ttggatgctc tggatgctgc tgcagctgag
2220
gccgaagccc gggctgaagc aagaacccgc atgggaattg agatgaggc tgtgtctggg
2280
ccctggagct gggatgacat tgagtttgag ctgctgacct gggatgagga aggagatttt
2340
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2400
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2460
aacttcgctg ccaactttgg tgccattggt ttcttctggg ttgagtgaga tgttggatat
2520
tgctatcaat cgcagtagtc tttcccctgt gtgaggctga agcctcagat tccttctaaa
2580
cacagctatc tagagagcca catcctgttg actgaaagtg gcatgcaaga taaatttatt
2640
tgctgttcct tgtctactgc ttttttttccc cttgtgtgct gtcaagtttt ggtatcagaa
2700
ataaacattg aaattgcaaa gtgaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2760
```

a
2761

<210> 6190
<211> 576
<212> PRT
<213> Homo sapiens

<400> 6190
Met Ala Thr Ser Gln Ala Asp Ile Glu Thr Asp Pro Gly Ile Ser Glu
1   5   10   15
Pro Asp Gly Ala Thr Ala Gln Thr Ser Ala Asp Gly Ser Gln Ala Gln
            20   25   30
Asn Leu Glu Ser Arg Thr Ile Ile Arg Gly Lys Arg Thr Arg Lys Ile
        35   40   45
Asn Asn Leu Asn Val Glu Glu Asn Ser Ser Gly Asp Gln Arg Arg Ala
    50   55   60
Pro Leu Ala Ala Gly Thr Trp Arg Ser Ala Pro Val Pro Val Thr Thr
65   70   75   80
Gln Asn Pro Pro Gly Ala Pro Pro Asn Val Leu Trp Gln Thr Pro Leu
            85   90   95
Ala Trp Gln Asn Pro Ser Gly Trp Gln Asn Gln Thr Ala Arg Gln Thr
            100   105   110
Pro Pro Ala Arg Gln Ser Pro Pro Ala Arg Gln Thr Pro Pro Ala Trp
        115   120   125
Gln Thr Gln Asn Pro Val Ala Trp Gln Asn Pro Val Ile Trp Pro Asn
    130   135   140
Pro Val Ile Trp Gln Asn Pro Val Ile Trp Pro Asn Pro Ile Val Trp
145   150   155   160
Pro Gly Pro Val Val Trp Pro Asn Pro Leu Ala Trp Gln Asn Pro Pro
            165   170   175
Gly Trp Gln Thr Pro Pro Gly Trp Gln Thr Pro Pro Gly Trp Gln Gly
            180   185   190
Pro Pro Asp Trp Gln Gly Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp
        195   200   205
Pro Leu Pro Pro Asp Trp Pro Leu Pro Thr Asp Trp Pro Leu Pro Pro
    210   215   220
Asp Trp Ile Pro Ala Asp Trp Pro Ile Pro Pro Asp Trp Gln Asn Leu
225   230   235   240
Arg Pro Ser Pro Asn Leu Arg Pro Ser Pro Asn Ser Arg Ala Ser Gln
            245   250   255
Asn Pro Gly Ala Ala Gln Pro Arg Asp Val Ala Leu Leu Gln Glu Arg
            260   265   270
Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys Asp Tyr Thr Lys Val
        275   280   285
Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile Ile Arg Glu Tyr Thr
    290   295   300
Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys Phe Val Leu Glu Lys
305   310   315   320
Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
            325   330   335
Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly Ile Leu Gly Thr Thr
            340   345   350
Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val Ile Leu Gly Val Ile

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              355                    360                    365
Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
    370                    375                    380
Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Leu Leu Gly Asp
385                    390                    395                    400
Leu Arg Lys Leu Leu Thr Tyr Glu Phe Val Lys Gln Lys Tyr Leu Asp
              405                    410                    415
Tyr Arg Arg Val Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
          420                    425                    430
Gly Leu Arg Ser Tyr His Glu Thr Ser Lys Met Lys Val Leu Arg Phe
      435                    440                    445
Ile Ala Glu Val Gln Lys Arg Asp Pro Arg Asp Trp Thr Ala Gln Phe
    450                    455                    460
Met Glu Ala Ala Asp Glu Ala Leu Asp Ala Leu Asp Ala Ala Ala Ala
465                    470                    475                    480
Glu Ala Glu Ala Arg Ala Glu Ala Arg Thr Arg Met Gly Ile Gly Asp
              485                    490                    495
Glu Ala Val Ser Gly Pro Trp Ser Trp Asp Asp Ile Glu Phe Glu Leu
              500                    505                    510
Leu Thr Trp Asp Glu Glu Gly Asp Phe Gly Asp Pro Trp Ser Arg Ile
          515                    520                    525
Pro Phe Thr Phe Trp Ala Arg Tyr His Gln Asn Ala Arg Ser Arg Phe
      530                    535                    540
Pro Gln Thr Phe Ala Gly Pro Ile Ile Gly Pro Gly Gly Thr Ala Ser
545                    550                    555                    560
Ala Asn Phe Ala Ala Asn Phe Gly Ala Ile Gly Phe Phe Trp Val Glu
              565                    570                    575
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<210> 6191
<211> 3021
<212> DNA
<213> Homo sapiens

<400> 6191
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120
gtacttcaag aaggtgcctc tgtttacttt ggttttgcac tgccatgcga ccaggtggtg
180
caggtctccc aaatgccacc ccctccaag cttccctctt tgctctaagt cctcaggcct
240
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300
gcactcaccg cagcctaagc tgggatccca gctcagaggt caggccatgt tgggatgttt
360
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420
attgatctgg agaacattgt gtactacaag gacgacaccc actactttgt gatgacagcc
480
aagaagcagt gcctgctgcg gctgggggtg ctgcgccagg actggccaga caccaatcgg
540
ctgctgggca gtgccaatgt ggtgaccgag gctctgcagc gctttacccg ggcagctgct
600
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5372

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720
caagagaagc atggcgcccg cctgctgctg ggactggtgg gggactgcct ggtggagccc
780
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840
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960
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1020
gtacgagacc tgtatgatgt gctagccaag gagcctgtgc agaggaacaa cgacaagaca
1080
gatacaggga tgccagccac cgggtcggca ggcacccagg aggagctgct acgctggtgc
1140
caggagcaga cagctgggta cccgggagtc cacgtctccg atttgtcttc ctcctgggct
1200
gatgggctag ctctgtgtgc cctggtgtac cggctgcagc ctggcctgct ggaaccctca
1260
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1380
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1620
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1680
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1740
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1800
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1920
gagaatagca tgccaccagg cctctcaact cccacagcct cgcaggaggg ggccggtcct
1980
gttccagatc ccagccagcc cacccgtcgg cagatccgcc tctccagccc ggagcgccag
2040
cggttgtcct cccttaacct tacccctgac ccggaaatgg agcctccacc caagcctccc
2100
cgcagctgct ccgccttggc ccgccacgcc ctggagagca gctttgtggg ctggggcctg
2160
ccagtccaga gccctcaagc tcttgtggcc atggagaagg aggaaaaaga gagtcccttc
2220
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tccagtgaag aggaagaaga agatgtgcct ttggactcag atgtggaaca ggccctgcag
2280
acctttgcca agacctcagg caccatgaat aactacccaa catggcgtcg gactctgctg
2340
cgccgtgcga aggaggagga gatgaagagg ttctgcaagg cccagaccat ccaacggcga
2400
ctaaatgaga ttgaggctgc cttgagggag ctagaggccg agggcgtgaa gctggagctg
2460
gccttgaggc gccagagcag ttccccagaa cagcaaaaga aactatgggt aggacagctg
2520
ctacagctcg ttgacaagaa aaacagcctg gtggctgagg aggccgagct catgatcacg
2580
gtgcaggaat tgaatctgga ggagaaacag tggcagctgg accaggagct acgaggctac
2640
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2700
aggaagctgg tggatttggt caaccagaga gatgccctca tccgcttcca ggaggagcgc
2760
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2820
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2880
ctgcctggca gagagccttg ctgtttacaa ttaaaatgtt tctgccacaa aaaaaaaaaa
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3000
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3021
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<210> 6192
<211> 815
<212> PRT
<213> Homo sapiens
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<400> 6192
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Cys Pro Val Pro Pro Gly Ile Asp Leu Glu Asn Ile Val Tyr Tyr Lys
            20                  25                  30
Asp Asp Thr His Tyr Phe Val Met Thr Ala Lys Lys Gln Cys Leu Leu
            35                  40                  45
Arg Leu Gly Val Leu Arg Gln Asp Trp Pro Asp Thr Asn Arg Leu Leu
        50                  55                  60
Gly Ser Ala Asn Val Val Thr Glu Ala Leu Gln Arg Phe Thr Arg Ala
65                  70                  75                  80
Ala Ala Asp Phe Ala Thr His Gly Lys Leu Gly Lys Leu Glu Phe Ala
                85                  90                  95
Gln Asp Ala His Gly Gln Pro Asp Val Ser Ala Phe Asp Phe Thr Ser
            100                 105                 110
Met Met Arg Ala Glu Ser Ser Ala Arg Val Gln Glu Lys His Gly Ala
        115                 120                 125
Arg Leu Leu Leu Gly Leu Val Gly Asp Cys Leu Val Glu Pro Phe Trp
        130                 135                 140
Pro Leu Gly Thr Gly Val Ala Arg Gly Phe Leu Ala Ala Phe Asp Ala
```

```
145                     150                    155                    160
Ala Trp Met Val Lys Arg Trp Ala Glu Gly Ala Glu Ser Leu Glu Val
                165                    170                    175
Leu Ala Glu Arg Glu Ser Leu Tyr Gln Leu Leu Ser Gln Thr Ser Pro
                180                    185                    190
Glu Asn Met His Arg Asn Val Ala Gln Tyr Gly Leu Asp Pro Ala Thr
                195                    200                    205
Arg Tyr Pro Asn Leu Asn Leu Arg Ala Val Thr Pro Asn Gln Val Arg
        210                    215                    220
Asp Leu Tyr Asp Val Leu Ala Lys Glu Pro Val Gln Arg Asn Asn Asp
225                    230                    235                    240
Lys Thr Asp Thr Gly Met Pro Ala Thr Gly Ser Ala Gly Thr Gln Glu
                245                    250                    255
Glu Leu Leu Arg Trp Cys Gln Glu Gln Thr Ala Gly Tyr Pro Gly Val
                260                    265                    270
His Val Ser Asp Leu Ser Ser Ser Trp Ala Asp Gly Leu Ala Leu Cys
                275                    280                    285
Ala Leu Val Tyr Arg Leu Gln Pro Gly Leu Leu Glu Pro Ser Glu Leu
                290                    295                    300
Gln Gly Leu Gly Ala Leu Glu Ala Thr Ala Trp Ala Leu Lys Val Ala
305                    310                    315                    320
Glu Asn Glu Leu Gly Ile Thr Pro Val Val Ser Ala Gln Ala Val Val
                325                    330                    335
Ala Gly Ser Asp Pro Leu Gly Leu Ile Ala Tyr Leu Ser His Phe His
                340                    345                    350
Ser Ala Phe Lys Ser Met Ala His Ser Pro Gly Pro Val Ser Gln Ala
                355                    360                    365
Ser Pro Gly Thr Ser Ser Ala Val Leu Phe Leu Ser Lys Leu Gln Arg
        370                    375                    380
Thr Leu Gln Arg Ser Arg Ala Lys Asp Leu Leu Gln Glu Asn Ala Glu
385                    390                    395                    400
Asp Ala Gly Gly Lys Lys Leu Arg Leu Glu Met Glu Ala Glu Thr Pro
                405                    410                    415
Ser Thr Glu Val Pro Pro Asp Pro Glu Pro Gly Val Pro Leu Thr Pro
                420                    425                    430
Pro Ser Gln His Gln Glu Ala Gly Ala Gly Asp Leu Cys Ala Leu Cys
        435                    440                    445
Gly Glu His Leu Tyr Val Leu Glu Arg Leu Cys Val Asn Gly His Phe
        450                    455                    460
Phe His Arg Ser Cys Phe Arg Cys His Thr Cys Glu Ala Thr Leu Trp
465                    470                    475                    480
Pro Gly Gly Tyr Glu Gln His Pro Gly Asp Gly His Phe Tyr Cys Leu
                485                    490                    495
Gln His Leu Pro Gln Thr Asp His Lys Ala Glu Gly Ser Asp Arg Gly
                500                    505                    510
Pro Glu Ser Pro Glu Leu Pro Thr Pro Ser Glu Asn Ser Met Pro Pro
                515                    520                    525
Gly Leu Ser Thr Pro Thr Ala Ser Gln Glu Gly Ala Gly Pro Val Pro
        530                    535                    540
Asp Pro Ser Gln Pro Thr Arg Arg Gln Ile Arg Leu Ser Ser Pro Glu
545                    550                    555                    560
Arg Gln Arg Leu Ser Ser Leu Asn Leu Thr Pro Asp Pro Glu Met Glu
                565                    570                    575
Pro Pro Pro Lys Pro Pro Arg Ser Cys Ser Ala Leu Ala Arg His Ala
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```
                  580                     585                     590
Leu Glu Ser Ser Phe Val Gly Trp Gly Leu Pro Val Gln Ser Pro Gln
            595                     600                     605
Ala Leu Val Ala Met Glu Lys Glu Glu Lys Glu Ser Pro Phe Ser Ser
        610                     615                     620
Glu Glu Glu Glu Glu Asp Val Pro Leu Asp Ser Asp Val Glu Gln Ala
625                     630                     635                     640
Leu Gln Thr Phe Ala Lys Thr Ser Gly Thr Met Asn Asn Tyr Pro Thr
                645                     650                     655
Trp Arg Arg Thr Leu Leu Arg Arg Ala Lys Glu Glu Glu Met Lys Arg
            660                     665                     670
Phe Cys Lys Ala Gln Thr Ile Gln Arg Arg Leu Asn Glu Ile Glu Ala
        675                     680                     685
Ala Leu Arg Glu Leu Glu Ala Glu Gly Val Lys Leu Glu Leu Ala Leu
        690                     695                     700
Arg Arg Gln Ser Ser Ser Pro Glu Gln Gln Lys Lys Leu Trp Val Gly
705                     710                     715                     720
Gln Leu Leu Gln Leu Val Asp Lys Lys Asn Ser Leu Val Ala Glu Glu
                725                     730                     735
Ala Glu Leu Met Ile Thr Val Gln Glu Leu Asn Leu Glu Glu Lys Gln
            740                     745                     750
Trp Gln Leu Asp Gln Glu Leu Arg Gly Tyr Met Asn Arg Glu Glu Asn
            755                     760                     765
Leu Lys Thr Ala Ala Asp Arg Gln Ala Glu Asp Gln Val Leu Arg Lys
        770                     775                     780
Leu Val Asp Leu Val Asn Gln Arg Asp Ala Leu Ile Arg Phe Gln Glu
785                     790                     795                     800
Glu Arg Arg Leu Ser Glu Leu Ala Leu Gly Thr Gly Ala Gln Gly
                805                     810                     815
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<210> 6193
<211> 2893
<212> DNA
<213> Homo sapiens

<400> 6193
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120
cattcatttt tttagaacat ccttcaaaga gttcatgcat cttactgagg acacctgacc
180
ttttgaagct tcataattca catctagatg tcaccggtct ttcccatgtt aacagttctg
240
accatgtttt attatatatg ccttcggcgc cgagccagga cagctacaag aggagaaatg
300
atgaacaccc atagagctat agaatcaaac agccagactt cccctctcaa tgcagaggta
360
gtccagtatg ccaaagaagt agtggatttc agttcccatt atggaagtga gaatagtatg
420
tcctatacta tgtggaattt ggctggtgta ccaaatgtat tcccaagttc tggtgacttt
480
actcagacag ctgtgtttcg aacttatggg acatggtggg atcagtgtcc tagtgcttcc
540
```

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ttgccattca agaggacgcc acctaatttt cagagccagg actatgtgga acttactttt
600
gaacaacagg tgtatcctac agctgtacat gttctagaaa cctatcatcc cggagcagtc
660
attagaattc tcgcttgttc tgcaaatcct tattccccaa atccaccagc tgaagtaaga
720
tgggagattc tttggtcaga gagacctacg aaggtgaatg cttcccaagc tcgccagttt
780
aaaccttgta ttaagcagat aaatttcccc acaaatctta tacgactgga agtaaatagt
840
tctcttctgg aatattacac tgaattagat gcagttgtgc tacatggtgt gaaggacaag
900
ccagtgcttt ctctcaagac ttcacttatt gacatgaatg atatagaaga tgatgcctat
960
gcagaaaagg atggttgtgg aatggacagt cttaacaaaa agtttagcag tgctgtcctc
1020
ggggaagggc caaataatgg gtattttgat aaactacctt atgagcttat tcagctgatt
1080
ctgaatcatc ttacactacc agacctgtgt agattagcac agacttgcaa actactgagc
1140
cagcattgct gtgatcctct gcaatacatc cacctcaatc tgcaaccata ctgggcaaaa
1200
ctagatgaca cttctctgga atttctacag tctcgctgca ctcttgtcca gtggcttaat
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ttatcttgga ctggcaatag aggcttcatc tctgttgcag gatttagcag gtttctgaag
1320
gtttgtggat ccgaattagt acgccttgaa ttgtcttgca gccactttct taatgaaact
1380
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1440
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1500
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1560
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1620
agcatgatag gagccaagtg taaaaaactc cggaccctgg atctgtggag atgtaagaat
1680
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1740
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1860
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1920
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1980
gtgtccttct gttcgcagat tgataacaga gctgtgctag aactgaatgc aagctttcca
2040
aaagtgttca taaaaaagag ctttactcag tgacttaata tatgttctgt attaaaatta
2100
atgtgctttg ttggggttta attttgggat tggttttggg ttttgttttt agttgtttta
2160
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atggtaagaa ttaagacatt tgtagatttt aaagaaaaat atgaaattgt ccattaaatc
2220

aagtaaaaat gtgcacaaat gttttcataa aatactgcaa gcacttctct tcaagaatat
2280

gagtggatat tattttttacc ttatgttaat cagtgatatg ctttagtcaa taatatgatt
2340

gataaaagaa taacatggaa tcatgctaac ttattttcaa aggaacactg agcaataaag
2400

tatcgtggca tttatgcaaa aaaaaaagtt aattttttac accttcatgt aaggatgtct
2460

tattaagcct gtgacctggc aagtgttttg tttggtatgt acaaaatggt cagagctagt
2520

tggagaatga gacatgcttt tccagctgtt tggttatttc tctggattaa ctgttcaact
2580

ggaaaatttt tagttttct agccaggtgt ggtggcacac acttgtagtc ctagcgacac
2640

gggaggtgga ggcaggagga ttacttgaga tgggattttg agactctagt gtacttatga
2700

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2760

aaaaaaaatt gtagtgtttc cactttctt ctgatatttt tgtctatttc actactggat
2820

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2880

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2893

<210> 6194
<211> 621
<212> PRT
<213> Homo sapiens

<400> 6194
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Ile Cys Leu Arg Arg Arg Ala Arg Thr Ala Thr Arg Gly Glu Met Met
            20   25   30
Asn Thr His Arg Ala Ile Glu Ser Asn Ser Gln Thr Ser Pro Leu Asn
            35   40   45
Ala Glu Val Val Gln Tyr Ala Lys Glu Val Val Asp Phe Ser Ser His
        50   55   60
Tyr Gly Ser Glu Asn Ser Met Ser Tyr Thr Met Trp Asn Leu Ala Gly
65   70   75   80
Val Pro Asn Val Phe Pro Ser Ser Gly Asp Phe Thr Gln Thr Ala Val
                85   90   95
Phe Arg Thr Tyr Gly Thr Trp Trp Asp Gln Cys Pro Ser Ala Ser Leu
                100   105   110
Pro Phe Lys Arg Thr Pro Pro Asn Phe Gln Ser Gln Asp Tyr Val Glu
            115   120   125
Leu Thr Phe Glu Gln Gln Val Tyr Pro Thr Ala Val His Val Leu Glu
        130   135   140
Thr Tyr His Pro Gly Ala Val Ile Arg Ile Leu Ala Cys Ser Ala Asn
145   150   155   160
Pro Tyr Ser Pro Asn Pro Pro Ala Glu Val Arg Trp Glu Ile Leu Trp

```
                         165                   170                   175
Ser Glu Arg Pro Thr Lys Val Asn Ala Ser Gln Ala Arg Gln Phe Lys
                180                   185                   190
Pro Cys Ile Lys Gln Ile Asn Phe Pro Thr Asn Leu Ile Arg Leu Glu
            195                   200                   205
Val Asn Ser Ser Leu Leu Glu Tyr Tyr Thr Glu Leu Asp Ala Val Val
        210                   215                   220
Leu His Gly Val Lys Asp Lys Pro Val Leu Ser Leu Lys Thr Ser Leu
    225                   230                   235                   240
Ile Asp Met Asn Asp Ile Glu Asp Asp Ala Tyr Ala Glu Lys Asp Gly
                    245                   250                   255
Cys Gly Met Asp Ser Leu Asn Lys Lys Phe Ser Ser Ala Val Leu Gly
                260                   265                   270
Glu Gly Pro Asn Asn Gly Tyr Phe Asp Lys Leu Pro Tyr Glu Leu Ile
            275                   280                   285
Gln Leu Ile Leu Asn His Leu Thr Leu Pro Asp Leu Cys Arg Leu Ala
    290                   295                   300
Gln Thr Cys Lys Leu Leu Ser Gln His Cys Cys Asp Pro Leu Gln Tyr
305                   310                   315                   320
Ile His Leu Asn Leu Gln Pro Tyr Trp Ala Lys Leu Asp Asp Thr Ser
                325                   330                   335
Leu Glu Phe Leu Gln Ser Arg Cys Thr Leu Val Gln Trp Leu Asn Leu
            340                   345                   350
Ser Trp Thr Gly Asn Arg Gly Phe Ile Ser Val Ala Gly Phe Ser Arg
        355                   360                   365
Phe Leu Lys Val Cys Gly Ser Glu Leu Val Arg Leu Glu Leu Ser Cys
    370                   375                   380
Ser His Phe Leu Asn Glu Thr Cys Leu Glu Val Ile Ser Glu Met Cys
385                   390                   395                   400
Pro Asn Leu Gln Ala Leu Asn Leu Ser Ser Cys Asp Lys Leu Pro Pro
                405                   410                   415
Gln Ala Phe Asn His Ile Ala Lys Leu Cys Ser Leu Lys Arg Leu Val
            420                   425                   430
Leu Tyr Arg Thr Lys Val Glu Gln Thr Ala Leu Leu Ser Ile Leu Asn
        435                   440                   445
Phe Cys Ser Glu Leu Gln His Leu Ser Leu Gly Ser Cys Val Met Ile
    450                   455                   460
Glu Asp Tyr Asp Val Ile Ala Ser Met Ile Gly Ala Lys Cys Lys Lys
465                   470                   475                   480
Leu Arg Thr Leu Asp Leu Trp Arg Cys Lys Asn Ile Thr Glu Asn Gly
                485                   490                   495
Ile Ala Glu Leu Ala Ser Gly Cys Pro Leu Leu Glu Glu Leu Asp Leu
                500                   505                   510
Gly Trp Cys Pro Thr Leu Gln Ser Ser Thr Gly Cys Phe Thr Arg Leu
            515                   520                   525
Ala His Gln Leu Pro Asn Leu Gln Lys Leu Phe Leu Thr Ala Asn Arg
        530                   535                   540
Ser Val Cys Asp Thr Asp Ile Asp Glu Leu Ala Cys Asn Cys Thr Arg
545                   550                   555                   560
Leu Gln Gln Leu Asp Ile Leu Gly Thr Arg Met Val Ser Pro Ala Ser
                565                   570                   575
Leu Arg Lys Leu Leu Glu Ser Cys Lys Asp Leu Ser Leu Leu Asp Val
            580                   585                   590
Ser Phe Cys Ser Gln Ile Asp Asn Arg Ala Val Leu Glu Leu Asn Ala
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5379

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              595                    600                    605
Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
    610                    615                    620
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<210> 6195
<211> 518
<212> DNA
<213> Homo sapiens

<400> 6195
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gcacgggact atgagggttc gccctgttct gtgtagcccc agctggttcc ctggggaaaa
120
gtttccactt ctgctgtcaa gaaccacaag ggtcaagccc catccctaca aataccaagt
180
acatccaaat tcttcactgg cacagaaatg gtgttacatc cactgggaac aaacctgcat
240
ccccacccca aggcatgtga caacagggac tgctaatgag ctttgtccgg gtaactcatt
300
cacgccatca tcttgctctt tccatagtca cttattaagc acaaactatg ccaaaaacta
360
tgtccagcac cgcacaggat ggtaaaatgc cctgaggggc cacccccatc tgactcccgt
420
tgagcggagt gggcagccct gcctgggagc tccagcctcc tgcacccacg tgcccccttg
480
ttatctctgc ctggatgcct cacaggcatc tcacgcgt
518
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<210> 6196
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6196
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Met Trp Ser Gln Lys Ala Ser Ser Gln Gln His Gly Thr Met Arg Val
1               5                   10                  15
Arg Pro Val Leu Cys Ser Pro Ser Trp Phe Pro Gly Glu Lys Phe Pro
            20                  25                  30
Leu Leu Leu Ser Arg Thr Thr Arg Val Lys Pro His Pro Tyr Lys Tyr
        35                  40                  45
Gln Val His Pro Asn Ser Ser Leu Ala Gln Lys Trp Cys Tyr Ile His
    50                  55                  60
Trp Glu Gln Thr Cys Ile Pro Thr Pro Arg His Val Thr Thr Gly Thr
65                  70                  75                  80
Ala Asn Glu Leu Cys Pro Gly Asn Ser Phe Thr Pro Ser Ser Cys Ser
                85                  90                  95
Phe His Ser His Leu Leu Ser Thr Asn Tyr Ala Lys Asn Tyr Val Gln
            100                 105                 110
His Arg Thr Gly Trp
        115
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<210> 6197
<211> 2841

<212> DNA
<213> Homo sapiens

<400> 6197
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ggggctgggc atggtcactc ctgctggatg tctggaaggt gaaaaccaag gacctaggga
120
aataccaggt acagcctttc cccgctcatc cagagcagga caaacaggcc aggtggtatc
180
aggagcccag gtctccagct ggagggaatg tcaaccctgc agtgggagca ggggcccatc
240
acgcatccta ggcacagatg ctaatgcagg cactgcaggt aagctgggct tggtatcctt
300
ccctggcttc agaaagaagc caacaaggag cgttttgcag aatgaaacct ttgtttccag
360
aagcactgct gactgtaagt ggttgccgtt tgtggcagtg agcattttgt ccattctgag
420
gttggattgg tttctccttt tggccttgcc ctgccctaca gaccataaag gagaacagca
480
agaagccccc agcaaacatc cacagatggc cctggacatc agccacattc tgaggaacat
540
gtcatgttct gggagggcta aggcatcaag taaggcctgt ggggctggag gatcacaggg
600
caggtggggc aatccagagc catgggggct tcccatggga attgggaggt cccaaggcag
660
agtcagaggt tccacaggag gagtcagaga gtcaccaagg gctctcctgg cccagggagc
720
agtcaacacc atggactgaa cacccactgg gctccaaccc ttgggccagg ctggggcatg
780
tggggccagg aggcagctca gagtgggagg cagagagaga agtgtgttca gagggcaccc
840
atatctggat gtaatgtggt cctgagactc tggctgggaa gtgcttccag ggtttcatat
900
gtgttatgca gctacttcct ctccccaacc ttaccgtgca ggaatcccag tgaatatgtt
960
gccaccatct tggagctcag tgccctcata gtgtaacagc accagcagat ctgcctgtgc
1020
acagacttcc tgtactacct cactcctgag gggagatgct tctgcagggc ctgcgacctg
1080
gtgcacaact ttnnagacac catcatcctg gagcggcact gcaccctcac tagccagggt
1140
gttgatgact tcctcaatgc caaggccacg ttcaagattt tcgacttcag tgatgcgttt
1200
gtgctgagca aggtgggctt ctccgggatt ttagttcagg aggtagaatg cagcttgaga
1260
tcaagtgtct gatcaaataa cttgaacttg atctggagag ctctggggag ccatagaagt
1320
tgttggataa aggagggaca gtcgtatatg ttttagagat gactgtggaa ggctgcctgg
1380
aaggagtgaa caagagccag gagaccaggg agggagcttg tggggcaggt ctggagatga
1440
caagggaggg atcctgcttt gatgaaaggt cttcagggaa tgtctcaggt tacactcagg
1500

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tgtcctcaga gctagtgtgt tcaggggtct tgcctccagg atgaaaatga gaaggagttg
1560
tcagacaaga acatataaat gaaggctggc atcttcgtga gtgccaatcg ttgtcctggt
1620
gtggactact gtgggaatag gggtctctcc atccagggac atggtggatg gaccctacat
1680
cactccattc tgcccttcct ttccctccca ttctgagggc ctcagtgcaa gggcgctgtc
1740
caacctctgg tgctgaagca gccgagagac ccaagcctgc cactcaggat atgacagcac
1800
agccagtggc ctctactgga tcctgtacaa cctcagaaga cacctagaca ctgggagtgc
1860
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1920
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1980
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2040
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2100
ctcagccatt ttgcaaaccc tggtcagaat gaaacattcc ttgggaactc gggccatgag
2160
aagcatcctt cctgaccacc tgactgcgga aacatcctta tcgcatcctc ccgggcgaag
2220
gcccaacagc ctgactgcag gaacatcctt gccatatcct gccgggcagc aagctctacc
2280
gcccagaccc ctccttccca gtcccatgat cgccccagcc tgtgagcggc agttggtgat
2340
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2400
agccgtcaac tgtctttcta tgtctttctt taacccttgc cttgccttca aaatctaaca
2460
atagctctac ctctccattt taccaaggag gatatgagac tcaaggagag caagagactt
2520
acccagaatt acacagccag tgagtcacag aacttgaact tgagctcagt tcagctgaat
2580
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2640
cccacaggct tgtcctagga gaccacatgc agactcctgg gaattgtgtc ctcttgggca
2700
caaaagaaga actgttcacc tgtgctgcat cagctaagtg tccccattgt cccaaattgt
2760
tatatttttt caaagtttca ttttagtaac tagatttctc acagctcagt gttgaaaaca
2820
aagcacagag gcatatagaa a
2841
```

```
<210> 6198
<211> 124
<212> PRT
<213> Homo sapiens
```

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<400> 6198
Met Gly Ala Ser His Gly Asn Trp Glu Val Pro Arg Gln Ser Gln Arg
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```
 1                   5                   10                  15
Phe His Arg Arg Ser Gln Arg Val Thr Lys Gly Ser Pro Gly Pro Gly
            20                  25                  30
Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly
        35                  40                  45
Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln
    50                  55                  60
Arg Glu Lys Cys Val Gln Arg Ala Pro Ile Ser Gly Cys Asn Val Val
65                  70                  75                  80
Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys
            85                  90                  95
Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr
            100                 105                 110
Val Ala Thr Ile Leu Glu Leu Ser Ala Leu Ile Val
            115                 120
```

<210> 6199
<211> 1777
<212> DNA
<213> Homo sapiens

<400> 6199
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tgccccatcc caccttacaa cactctggcc cctctgcttg tccccttttt tccccaggca
120
ggaggcaatc ccaggggcct gcctgataga ggcatttcct gtccctgtct cctcctgcat
180
ctcctttatc ctgcactgcc accctctatt ccccattctg tgttggactt tgaaggcccc
240
aagcccagcc aaagcactga gttccccctt aagacacctc cacaccctcc ccacaagcaa
300
agcacaaatt ttggggtcca tgtagcatgg gccacgtagg aggctcctga cttgccaggg
360
gcccagcctc agcataccca ccgaggcagc tgccagcctg ggctgagggt gggcatgagg
420
caggagtcag cacttggacc tagggatgtg aggttttctg tgccccaagt ttgtgggaag
480
gtgggcacta ctgctgggcc cacagacaca gccagctggc aaaagggagg tctagcccag
540
cagagagatg aggacatttt gcttctcctt catgcccaca gcatgagctg agcttctgct
600
ttgctggaaa tgaaataaac ttggtatgaa ttgtgccaag gcctccccag ttgtcatcct
660
gcctcttgtt gccctccctg tccttgcccc ccaccccaca cccatgcccc tgtttcctta
720
cagattttga tattgttcta atgtgtaata gaaccagccg agtccccttt tatcagaagg
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840
cccagtacgt gtgcccacag tggacacact cacacctcca acacacccac gcgcaggcat
900
gtgtacacgc atgtacacac gcatgcatgc acagccagat ggccactcag cacagatgtg
960
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gcagagggaa tggtctgatc ctgctgaaag ccattaagga gaaacgaatt tcccagtgcc
1020
cgggctgcaa gagagcctta taggggccct gtttcctggg catgcgcttc ctctgccagc
1080
caacccccac ttgcccaagt cactggtgca ataacttttc tgccttcctc agagcagaga
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1200
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1260
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1320
tccccacacc cacagggagg cttcacacac tgcccagtac cggggatgcc aggaggcagg
1380
cccctctgct gctgccactg ctgccaacac tgcccagctt gtgaggccag gaggagcccc
1440
tgtcccactc ggtgctgctg ctcttctgac ccctgctgtg aggaatggga ttcttggtcg
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aaaaaattgg ttttcctttt ttgtataaat gaaaagaatc caggagaagc tgccaccctc
1560
ccctcccagc gtgatgcgct accttgcttc ggcgtcttgt cgcccttccc gcctttggtc
1620
cagggacagc ccagcagatc ctcctggttc tgacctgggg ggtgtttgca tcacccccctt
1680
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1740
tttataaata aagtgtttaa aacaaaaaaa aaaaaaa
1777
```

```
<210> 6200
<211> 164
<212> PRT
<213> Homo sapiens
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```
<400> 6200
Val Gly Val Gly Ser Ser Ala Glu Pro Ser Arg His Gly Cys Pro Leu
 1               5                  10                  15
Phe Trp Glu Glu Gly Ser Ala Pro Arg Pro Gln Glu Ser Arg Gln Arg
                20                  25                  30
Pro Pro Lys Pro Asp Cys Gln Gln Lys Pro Ser Pro Ser Glu Gly Gln
            35                  40                  45
Val Gly Val Pro Xaa Arg Ser Pro His Pro Gln Gly Gly Phe Thr His
        50                  55                  60
Cys Pro Val Pro Gly Met Pro Gly Gly Arg Pro Leu Cys Cys Cys His
65                  70                  75                  80
Cys Cys Gln His Cys Pro Ala Cys Glu Ala Arg Arg Ser Pro Cys Pro
                85                  90                  95
Thr Arg Cys Cys Cys Ser Ser Asp Pro Cys Cys Glu Glu Trp Asp Ser
                100                 105                 110
Trp Ser Lys Lys Leu Val Phe Leu Phe Cys Ile Asn Glu Lys Asn Pro
            115                 120                 125
Gly Glu Ala Ala Thr Leu Pro Ser Gln Arg Asp Ala Leu Pro Cys Phe
            130                 135                 140
Gly Val Leu Ser Pro Phe Pro Pro Leu Val Gln Gly Gln Pro Ser Arg
```

145   150   155   160
Ser Ser Trp Phe

<210> 6201
<211> 604
<212> DNA
<213> Homo sapiens

<400> 6201
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120
ccaggacaag accagccctg atgggagaag ccagaggacc cagaggaact tccaggaggc·
180
ccttagctcc ctcagacaga atgcgggatc gcaatgccca gcaaagggca attcaaggac
240
agtggacgct ggggagagga gcagagtggg cagctctcag gagggcagga ctgcgaggct
300
gcagggagga gttcggtggg aagggacagc ctcagagcct aagctgcgcc tcctgggaaa
360
ggggtatgac tggcaggcac acaaatgtct ctcaaggaag gtgggcctgg ggccacagag
420
ctcccagagg agggagtgga gagggagagc ccgcagagga gagaccaggc agggctggcg
480
atcacgcagg tgcacagggt gaacgtcagg actgaaacgg aagacaatgt ccccatgcaa
540
gactggctga aacgaactca cacagaattt ttaagaggct cctgtgttgg gtgaaaaccg
600
gccg
604

<210> 6202
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6202
Met Gly Glu Ala Arg Gly Pro Arg Gly Thr Ser Arg Arg Pro Leu Ala
1   5   10   15
Pro Ser Asp Arg Met Arg Asp Arg Asn Ala Gln Gln Arg Ala Ile Gln
           20   25   30
Gly Gln Trp Thr Leu Gly Arg Gly Ala Glu Trp Ala Ala Leu Arg Arg
        35   40   45
Ala Gly Leu Arg Gly Cys Arg Glu Glu Phe Gly Gly Lys Gly Gln Pro
     50   ·55   60
Gln Ser Leu Ser Cys Ala Ser Trp Glu Arg Gly Met Thr Gly Arg His
65   70   75   80
Thr Asn Val Ser Gln Gly Arg Trp Ala Trp Gly His Arg Ala Pro Arg
              85   90   95
Gly Gly Ser Gly Glu Gly Glu Pro Ala Glu Glu Arg Pro Gly Arg Ala
           100   105   110
Gly Asp His Ala Gly Ala Gln Gly Glu Arg Gln Asp

5385

                    115   120

<210> 6203
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 6203
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tagcgggagc ccggccggag ctgggtctgg agacgccgtg gcagcctgaa cggagtgtgc
120
gacggattgg gaggtttgtc tacagatttt gagcgttcga agttgacccc tgactaagta
180
tactttgctg ctccctcagc ctttgaaaaa atgtctgtca catatgatga ttccgttgga
240
gtagaagtgt ccagcgacag cttctgggag gtcgggaact acaagcggac tgtgaagcgg
300
atcgacgatg gccaccgcct gtgcagcgac ctcatgaact gcctgcatga gcgggcgcgc
360
atcgagaagg cgtatgcgca gcagctcact gagtgggccc ggcgctggag gcagctcgtg
420
gagaaagggc cccagtacgg gaccgtggag aaggcctgga tggccttcat gtccgaggca
480
gagagggtga gcgagctgca cctcgaggtg aaggcctcac tgatgaacga tgacttcgag
540
aagatcaaga actggcagaa ggaagccttt cacaagcaga tgatgggcgg cttcaaggag
600
accaaggaag ctgaggacgg ctttcggaag gcacagaagc cctgggccaa gaagctgaaa
660
gaggtagaag cagcaaagaa agcccaccat gcagcgtgca agaggagaa gctggctatc
720
tcacgagaag ccaacagcaa ggcagaccca tccctcaacc ctgaacagct caagaaattg
780
caagacaaaa tagaaaagtg caagcaagat gttcttaaga ccaaagagaa gtatgagaag
840
tccctgaagg aactcgacca gggcacaccc cagtacatgg agaacatgga gcaggtgttt
900
gagcagtgcc agcagttcga ggagaaacgc cttcgcttct ccgggaggt tctgctggag
960
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1020
gagcagagca tcagagcagc tgatgcagtg gaggacctga ggtggttccg agccaatcac
1080
gggccgggca tggccatgaa ctggccgcag tttgaggagt ggtccgcaga cctgaatcga
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accctcagcc ggagagagaa gaagaaggcc actgacggcg tcaccctgac gggcatcaac
1200
cagacaggcg accagtctct gccgagtaag cccagcagca cccttaatgt cccgagcaac
1260
cccgcccagt ctgcgcagtc acagtccagc tacaacccct tcgaggatga ggacgacacg
1320
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1380

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2040
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2100
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2520
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2580
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3000
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3180
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3360
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3462
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<210> 6204
<211> 486
<212> PRT
<213> Homo sapiens

<400> 6204

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Met Ser Val Thr Tyr Asp Asp Ser Val Gly Val Glu Val Ser Ser Asp
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Ser Phe Trp Glu Val Gly Asn Tyr Lys Arg Thr Val Lys Arg Ile Asp
            20                  25                  30
Asp Gly His Arg Leu Cys Ser Asp Leu Met Asn Cys Leu His Glu Arg
        35                  40                  45
Ala Arg Ile Glu Lys Ala Tyr Ala Gln Gln Leu Thr Glu Trp Ala Arg
    50                  55                  60
Arg Trp Arg Gln Leu Val Glu Lys Gly Pro Gln Tyr Gly Thr Val Glu
65                  70                  75                  80
Lys Ala Trp Met Ala Phe Met Ser Glu Ala Glu Arg Val Ser Glu Leu
                85                  90                  95
His Leu Glu Val Lys Ala Ser Leu Met Asn Asp Asp Phe Glu Lys Ile
            100                 105                 110
Lys Asn Trp Gln Lys Glu Ala Phe His Lys Gln Met Met Gly Gly Phe
        115                 120                 125
Lys Glu Thr Lys Glu Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro
    130                 135                 140
Trp Ala Lys Lys Leu Lys Glu Val Glu Ala Ala Lys Lys Ala His His
145                 150                 155                 160
Ala Ala Cys Lys Glu Glu Lys Leu Ala Ile Ser Arg Glu Ala Asn Ser
                165                 170                 175
Lys Ala Asp Pro Ser Leu Asn Pro Glu Gln Leu Lys Lys Leu Gln Asp
            180                 185                 190
Lys Ile Glu Lys Cys Lys Gln Asp Val Leu Lys Thr Lys Glu Lys Tyr
        195                 200                 205
Glu Lys Ser Leu Lys Glu Leu Asp Gln Gly Thr Pro Gln Tyr Met Glu
    210                 215                 220
Asn Met Glu Gln Val Phe Glu Gln Cys Gln Gln Phe Glu Glu Lys Arg
225                 230                 235                 240
Leu Arg Phe Phe Arg Glu Val Leu Leu Glu Val Gln Lys His Leu Asp
```

5388

```
                    245                    250                    255
Leu Ser Asn Val Ala Gly Tyr Lys Ala Ile Tyr His Asp Leu Glu Gln
                260                    265                    270
Ser Ile Arg Ala Ala Asp Ala Val Glu Asp Leu Arg Trp Phe Arg Ala
            275                    280                    285
Asn His Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp
        290                    295                    300
Ser Ala Asp Leu Asn Arg Thr Leu Ser Arg Arg Glu Lys Lys Lys Ala
305                    310                    315                    320
Thr Asp Gly Val Thr Leu Thr Gly Ile Asn Gln Thr Gly Asp Gln Ser
                325                    330                    335
Leu Pro Ser Lys Pro Ser Ser Thr Leu Asn Val Pro Ser Asn Pro Ala
            340                    345                    350
Gln Ser Ala Gln Ser Gln Ser Ser Tyr Asn Pro Phe Glu Asp Glu Asp
        355                    360                    365
Asp Thr Gly Ser Thr Val Ser Glu Lys Asp Asp Thr Lys Ala Lys Asn
    370                    375                    380
Val Ser Ser Tyr Glu Lys Thr Gln Ser Tyr Pro Thr Asp Trp Ser Asp
385                    390                    395                    400
Asp Glu Ser Asn Asn Pro Phe Ser Ser Thr Asp Ala Asn Gly Asp Ser
                405                    410                    415
Asn Pro Phe Asp Asp Asp Ala Thr Ser Gly Thr Glu Val Arg Val Arg
            420                    425                    430
Ala Leu Tyr Asp Tyr Glu Gly Gln Glu His Asp Glu Leu Ser Phe Lys
        435                    440                    445
Ala Gly Asp Glu Leu Thr Lys Met Glu Asp Glu Asp Glu Gln Gly Trp
    450                    455                    460
Cys Lys Gly Arg Leu Asp Asn Gly Gln Val Gly Leu Tyr Pro Ala Asn
465                    470                    475                    480
Tyr Val Glu Ala Ile Gln
                485
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<210> 6205
<211> 926
<212> DNA
<213> Homo sapiens

<400> 6205
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120
agccagaagt tgctgttcat ggaaacttcg gccaaactga accaccaggt gtcggaggtg
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ttcaatacag tggcccaaga gctactgcag agaagcgacg aggagggcca ggctctacng
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300
atgctgggtt gctcccgagc cctagatgtt cctggaagtt ggccccettt atgaaaacca
360
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420
gtgctgtgcc ctatccccac tgataccatc tgattccccg atgcctgtgc ctgttccacc
480
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tggacggtgg ccccctcagc ctggcagcct ctggacagag aggaaggaag gattggaaaa
540
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600
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926

<210> 6206
<211> 92
<212> PRT
<213> Homo sapiens

<400> 6206
Xaa Arg Leu Pro Xaa Arg Ile Gly Pro Ser Phe Asn Gly Gly Cys Gly
1   5   10   15
Glu Met Glu Lys Trp Gly Glu Asp Phe Gly Glu Ser Arg Gly Arg Ala
            20   25   30
Arg Glu Gly Lys Glu Phe Ala Asp Ser Gln Lys Leu Leu Phe Met Glu
        35   40   45
Thr Ser Ala Lys Leu Asn His Gln Val Ser Glu Val Phe Asn Thr Val
    50   55   60
Ala Gln Glu Leu Leu Gln Arg Ser Asp Glu Glu Gly Gln Ala Leu Xaa
65   70   75   80
Gly Glu Asp Thr Pro Cys Leu Gly His Gly Gln Leu
                85   90

<210> 6207
<211> 1384
<212> DNA
<213> Homo sapiens

<400> 6207
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120
ggaaacaccg ggaatccctg cagctgagcc tgtctctcac gggaccggga agctggagag
180
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240
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300
acctacttcg gggcccactt tgctgtcatc cgccgagcgt ccctggagaa gaacccgtac
360

caggctgtgc accaatgggc cttctctgcg gggttgagcc tggtgggcct cctgactctg
420

ggagccgtgc tgagcgctgc agccaccgtg agggaggccc agggcctcat ggcagggggc
480

ttcctgtgct ctccctggc gttctgygca caggtgcagg tggtgttctg gagactccac
540

agccccaccc aggtggagga cgccatgctg gacacctacg acctggtata tgagcaggcg
600

atgaaaggta cgtcccacgt ccggcggcag gagctggcgg ccatccagga cgtgtttctg
660

tgctgtggga agaagtctcc tttcagccgt ctggggagca cagaggctga cctgtgtcag
720

ggagaggagg cggcgagaga ggactgcctt cagggcatcc ggagcttcct gaggacacac
780

cagcaggtcg cctccagcct gaccagcatc ggcctggccc tcacggtgtc cgccttgctc
840

ttcagctcct tcctgtggtt tgccatccgc tgtggctgca gcttggaccg caagggcaaa
900

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960

tcccagggtg gacccacaca ttgtctccac tccgaagcag ttgctattgg tccaagagga
1020

tgctcgggta gtcttcggtg gctgcaggag agcgatgctg cgcctctgcc cctctcctgc
1080

cacctggctg cccacagagc tctccagggc agaagtcgcg gtgggctcag tgggtgccct
1140

gagcggggtc tctcagactg acgtcaggcc ttggtgggct gcactctcac ctggaggctc
1200

cggggaagca tctgcctcca ggaccattca ggctgttgac aagtcaactc ctcatggctg
1260

taggactgag gttcccaagt ccttgtccct ggtcctgtgg tccctccacc ttcaaaccag
1320

caatggtgca ttgagcaaat tgtggtcaaa tatacatcac atcaaattta ccatcttaaa
1380

aaaa
1384

<210> 6208
<211> 290
<212> PRT
<213> Homo sapiens

<400> 6208
Met Val Thr Leu Thr Tyr Phe Gly Ala His Phe Ala Val Ile Arg Arg
1   5   10   15
Ala Ser Leu Glu Lys Asn Pro Tyr Gln Ala Val His Gln Trp Ala Phe
            20   25   30
Ser Ala Gly Leu Ser Leu Val Gly Leu Leu Thr Leu Gly Ala Val Leu
        35   40   45
Ser Ala Ala Ala Thr Val Arg Glu Ala Gln Gly Leu Met Ala Gly Gly
    50   55   60
Phe Leu Cys Phe Ser Leu Ala Phe Xaa Ala Gln Val Gln Val Val Phe
65   70   75   80
Trp Arg Leu His Ser Pro Thr Gln Val Glu Asp Ala Met Leu Asp Thr

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                     85                    90                    95
Tyr Asp Leu Val Tyr Glu Gln Ala Met Lys Gly Thr Ser His Val Arg
            100                   105                   110
Arg Gln Glu Leu Ala Ala Ile Gln Asp Val Phe Leu Cys Cys Gly Lys
        115                   120                   125
Lys Ser Pro Phe Ser Arg Leu Gly Ser Thr Glu Ala Asp Leu Cys Gln
    130                   135                   140
Gly Glu Glu Ala Ala Arg Glu Asp Cys Leu Gln Gly Ile Arg Ser Phe
145                   150                   155                   160
Leu Arg Thr His Gln Gln Val Ala Ser Ser Leu Thr Ser Ile Gly Leu
                165                   170                   175
Ala Leu Thr Val Ser Ala Leu Leu Phe Ser Ser Phe Leu Trp Phe Ala
            180                   185                   190
Ile Arg Cys Gly Cys Ser Leu Asp Arg Lys Gly Lys Tyr Thr Leu Thr
        195                   200                   205
Pro Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro Ser Leu Leu Arg Cys
    210                   215                   220
Ser Gln Gly Gly Pro Thr His Cys Leu His Ser Glu Ala Val Ala Ile
225                   230                   235                   240
Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp Leu Gln Glu Ser Asp
                245                   250                   255
Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala Ala His Arg Ala Leu
            260                   265                   270
Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys Pro Glu Arg Gly Leu
        275                   280                   285
Ser Asp
    290


<210> 6209
<211> 2269
<212> DNA
<213> Homo sapiens

<400> 6209
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120
gcggggaaac cctggatatt tcactctgaa gtggtttctt gaaagaaaac tcaactgact
180
caggccatga gcatctttta cactgaagca agcatctcct cacaagtgcc tcctacaagt
240
cactagagtc atattcaaca ttacaaaatg cagtgctact taaattttaa agcactgagg
300
gaccaagaaa tgggctgatc aagtccttgg ccactcactg ttaagagcca ggatttacag
360
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420
aaatttcaca gccagcagcg ctttcagtcc acaacagatt tctcagagga aacatggata
480
ttttgcgtag gcagaaacag tgaggagtac aaagcaaagc tataaatacc accaatggtt
540
ctgctatgtg catccgatat tttttgcccg atctgaaata ctgcaagggc ttaaccattc
600
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aaacaccgca tgacaacgaa cccagtggac tgtgaaactc aggctgcagg agggtggctt
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720
atgaacggtg ggtcacggct atgacgtgaa ggagaaagag aagacacact cacagaacag
780
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840
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900
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1020
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1080
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1140
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1200
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1260
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2100
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2160
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2220
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2269

<210> 6210
<211> 165
<212> PRT
<213> Homo sapiens

<400> 6210
Met Gly Ile Phe Leu Thr Leu Cys Phe Pro Val Gln Lys His Asn Thr
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Ser Phe Arg Arg Asn Val Ser Gln Ser Val Thr Thr Lys Ala Leu Leu
            20   25   30
Ser Pro Ser Leu Arg Gly Thr His Leu Leu Phe Leu Pro Gln Ala Asp
        35   40   45
Val Val Asp Glu Ala Ile Asp Ser Leu Ala Arg Thr Lys Gly Val Met
    50   55   60
Lys Pro Pro Cys Ser Glu Gly Ser Pro Trp Arg Cys Pro His Phe Thr
65   70   75   80
Cys Trp Val Leu Gln Ala Arg Lys Pro Gly Ser Gly Gly Thr Arg Glu
                85   90   95
Arg Gln Ala Cys Val Trp Thr Ser Ala Gly Ala Ala Ala Leu Arg Leu
            100   105   110
Ala Arg Glu Arg Gln Arg Trp Val Phe Arg Phe His Ala Tyr Val Trp
        115   120   125
Ala His Ser Gln His Gly Arg Val Ser Ala Val Leu Val Leu Thr Leu
    130   135   140
Pro Glu Gln Gln Trp Thr Asp Glu Ile Arg Leu Phe Gln Lys Gln Arg
145   150   155   160
Trp Pro Gln Pro Ser
                165

<210> 6211
<211> 2163
<212> DNA
<213> Homo sapiens

<400> 6211
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120
gcaaatttgg agcgacagat ctatgctttt gagggaagct acctggaaga cactcagatg
180
tatggcaata ttattcgtgg ctggngatcg gtatctgacc aaccannaaa aaactccaat
240
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300
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aatgagccca gccaggagga ccctgaggat ctggatggat ctgtgcaggg agtgaaacct
480

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1860
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1980
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2040
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2100
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2160
aaa
2163


<210> 6212
<211> 209
<212> PRT
<213> Homo sapiens

<400> 6212
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Pro Gln Ile Pro Asp Thr Arg Arg Glu Leu Ala Glu Leu Val Lys Gly
        20                  25                  30
Lys Gln Glu Leu Ala Glu Thr Leu Ala Asn Leu Glu Arg Gln Ile Tyr
        35                  40                  45
Ala Phe Glu Gly Ser Tyr Leu Glu Asp Thr Gln Met Tyr Gly Asn Ile
    50                  55                  60
Ile Arg Gly Trp Xaa Ser Val Ser Asp Gln Pro Xaa Lys Asn Ser Asn
65                  70                  75                  80
Ser Lys Asn Asp Arg Arg Asn Arg Lys Phe Lys Glu Ala Glu Arg Leu
                85                  90                  95
Phe Ser Lys Ser Ser Val Thr Ser Ala Ala Ala Val Ser Ala Leu Ala
            100                 105                 110
Gly Val Gln Asp Gln Leu Ile Glu Lys Arg Glu Pro Gly Ser Gly Thr
            115                 120                 125
Glu Ser Asp Thr Ser Pro Asp Phe His Asn Gln Glu Asn Glu Pro Ser
        130                 135                 140
Gln Glu Asp Pro Glu Asp Leu Asp Gly Ser Val Gln Gly Val Lys Pro
145                 150                 155                 160
Gln Lys Ala Ala Ser Ser Thr Ser Ser Gly Ser His His Ser Ser His
                165                 170                 175
Lys Lys Arg Lys Asn Lys Asn Arg His Ser Pro Ser Gly Met Phe Asp
            180                 185                 190
Tyr Asp Phe Glu Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp
        195                 200                 205
Tyr


<210> 6213
<211> 1160
<212> DNA
<213> Homo sapiens

<400> 6213
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120
tctctttcga ctttgcagct gtacttgttt tgctcctcta cccgcaggag ctgacatgga
180
cccaaatcct cgggccgccc tggagcgcca gcagctccgc cttcgggagc ggcaaaaatt
240
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5396

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cttcgaggac attttacagc cagagacaga gtttgtcttt cctctgtccc atctgcatct
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420
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720
cccagccaga gcctgtcggg agaagaccag actctttact tgcagtaggc accagaggtg
780
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1160


<210> 6214
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6214
Pro Trp Gly Pro Gly Cys Ser Arg Cys Val Leu Ala Leu Arg Arg Ser
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Ser Thr Asn Pro Pro Val Val Trp Gly Gly Gln Pro Phe Gly Gly Ala
            20                  25                  30
Glu Pro Ala Xaa Cys Leu His Gln Thr Gly Pro His Leu Gly Pro Pro
        35                  40                  45
Pro Pro Pro Pro Pro Thr Pro Pro Pro Thr Cys Ile Ala Gln Ile Gln
    50                  ·55                  60
Val Met Met Glu Gln Ile Arg Pro Trp His Ser Arg Met Lys Arg Arg
65                  70                  75                  80
Lys Gly Val Met Glu Gly Gln Ser Leu Glu Pro Ala Ala Ser Ser Gly
                85                  90                  95
Pro Leu Pro Thr Asp
                100
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<210> 6215
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6215
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120
ctcctcagag catgtggccg ccagccccag gagcccagcc tcttgagatg ctcccagggt
180
ggacccacac attgtctcca ctccgaagca gttgctattg gtccaagagg atgctcgggt
240
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300
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420
atctgcctcc aggaccattc aggctgttga caagtcaact cctcatggct gtaggactga
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attgagcaaa ttgtggtcaa atatacatca catcaaattt accatcttaa ccattgttaa
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<210> 6216
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6216
Met Ile Pro Leu Leu Leu Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro
1               5                   10                  15
Ser Leu Leu Arg Cys Ser Gln Gly Gly Pro Thr His Cys Leu His Ser
            20                  25                  30
Glu Ala Val Ala Ile Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp
        35                  40                  45
Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
    50                  55                  60
Ala His Arg Ala Leu Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys
65                  70                  75                  80
Pro Glu Arg Gly Leu Ser Asp
                85


<210> 6217
<211> 2955
<212> DNA
<213> Homo sapiens

<400> 6217
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ccggcccatc cgtgggggcg acttgagcgt tgagggcgcg cggggaggcg agccaccatg
120

ttcagccagc agcagcagca gcagctccag caacagcagc agcagctcca gcagttacag
180

cagcagcagc tccagcagca gcaattgcag cagcagcagt tactgcagct ccagcagctg
240

ctccagcagt ccccaccaca ggccccgttg cccatggctg tcagccgggg gctcccccg
300

cagcagccac agcagccgct tctgaatctc cagggcacca actcagcctc cctcctcaac
360

ggctccatgc tgcagagagc tttgctttta cagcagttgc aaggactgga ccagtttgca
420

atgccaccag ccacgtatga cactgccggt ctcaccatgc ccacagcaac actgggtaac
480

ctccgaggct atggcatggc atccccaggc ctcgcagccc ccagcctcac accccacaa
540

ctggccactc caaatttgca acagttcttt ccccaggcca ctcgccagtc cttgctggga
600

cctcctcctg ttggggtccc catgaaccct tcccagttca acctttcagg acggaacccc
660

cagaaacagg cccggacctc ctcctctacc accccccaatc gaaaggattc ttcttctcag
720

acaatgcctg tggaagacaa gtcagacccc ccagagggggt ctgaggaagc cgcagagccc
780

cggatggaca caccagaaga ccaagattta ctgccctgcc cagaggacat cgccaaggaa
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1080

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1200

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1260

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1380

cagctgcaga agcaggtcca gacacagaca tatccacagg tccacacaca ggcacagcca
1440

agcgtccagc cacaggagca tcctccagcg caggtgtcag tacagccacc agagcagacc
1500

catgagcagc tcacaccca gccgcaggtg tcgttgctgg ctccagagca aacaccagtt
1560

gtggttcatg tctgcgggct ggagatgcca cctgatgcag tagaagctgg tggaggcatg
1620

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gaaaagacct tgccagagcc tgtgggcacc caagtcagca tggaagagat tcagaatgag
1680
tcggcctgtg gcctagatgt gggagaatgt gaaaacagag cgagagagat gccaggggta
1740
tggggcgccg ggggctccct gaaggtcacc attctgcaga gcagtgacag ccgggccttt
1800
agcactgtac ccctgacacc tgtcccccgc cccagtgact ccgtctcctt cacccctgcg
1860
gctaccagca ctccctctaa gcaggccctc cagttcttct gctacatctg caaggccagc
1920
tgctccagcc agcaggagtt ccaggaccac atgtcggagc ctcagcacca gcagcggcta
1980
ggggagatcc agcacatgag ccaagcctgc ctcctgtccc tgctgcccgt gccccgggac
2040
gtcctggaga cagaggatga ggagcctcca ccaaggcgct ggtgcaacac ctgccagctc
2100
tactacatgg gggacctgat ccaacaccgc aggacacagg accacaagat tgccaaacaa
2160
tccttgcgac ccttctgcac cgtttgcaac cgctacttca aaacccctcg caagtttgtg
2220
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2280
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2340
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2400
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2460
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2520
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2580
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2640
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2700
tccagcggcc gcccacccctc ccagcccaac acccaggaca aaacacccag caaggtgacg
2760
gctcgaccct cccagccccc actacctcgg cgctcaaccc gcctcaaaac ctgatagagg
2820
gacctccctg tccctggcct gcctgggtcc agatctgcta atgctttta ggagtctgcc
2880
tggaaacttt gacatggttc atgtttttac tcaaaatcca ataaaacaag gtagtttggc
2940
aaaaaaaaaa aaaaa
2955
```

```
<210> 6218
<211> 133
<212> PRT
<213> Homo sapiens
```

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<400> 6218
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
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Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20                  25                  30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
            35                  40                  45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
        50                  55                  60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65                  70                  75                  80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85                  90                  95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100                 105                 110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
            115                 120                 125
Thr Arg Leu Lys Thr
        130
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```
<210> 6219
<211> 2495
<212> DNA
<213> Homo sapiens

<400> 6219
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catcgttcca agcccggccc ccgccccagc cctccctcag ctgggaacac agccaggtgc
120
cctcagaccc ctggctctgc acaagggggg cctgcccccт cgccccagnn ctatatacac
180
gacagcccat cctgctggcc gtggacaaaa gctgggagct ccntgtgccc agtcaggagc
240
ccctacagtc caccagctgc gcggccgggt ccagggngcc cactgtggtg ccagcgagtt
300
tctcaaaacc cagggcccag ccccagcnnt gggcccctgc caagccccag gcctgtgtgc
360
tgggatggag cctccacact gaggctggta aaagctgaac tcaacagcag caatgagagt
420
gctgggtggg cttgggggga tggggagcag gccccaccca gagcctcctc tgaaggaggg
480
gacgctgcgc ccttccttcc tgctgcccag actgccccta ccgggtccgg cgccggctga
540
ggtctaagta agcagggatg gggggtggca agaggagtgt aagtgaaagc acagacagtc
600
ggagactcgg ccagtgtaga cagacccaga gactcggcca gtgtagacag agccaggctg
660
ggcagcccgg cgacgctggc cccacgcaca cgggccaccc tggtgctggt gatcgatacg
720
gcagggaggg ggtgggcagg gagggtcctg aacacatgtg ggctgctggg ctgctgggcc
780
ggggtgccta cactgtaact agcagcatag tgcttaacta gttaacaaga aatgctgctt
840
cccttttgaat tgtttcgggg gtgtagaaat tgcacttatt tctatgaacc ccatggaggg
900
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atgcccacag ctgagcctcc aggcgaggca tggcaggtca gtgcctggcc gctgagcatc
960
cacgggccac agggcgggat cctcccggcc cccagggact gcagcctctg cggccacggg
1020
tgcagcgagg accggaaccc acaggggaa cctgagcaac gtctgaggtg ccctgaagtg
1080
gctccaggcg agaccggagc cacacagtcc cggggagcac gaggcggccc agccccaggt
1140
cccggtgcag agggagtggc ctgatggtga ctgggcggag gcctctgccc ctcacaggac
1200
gtcgtcaaag tccagcagct tcgagtgctg gcggctcttc cacaggcgat acaaccggaa
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1320
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1380
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1440
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1560
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1980
catgcgcagg tgtttgcgga agttcctctg gattacagac gcggaatcat tctcccgttt
2040
ccggcgcttc ctctccgcgt agcccctgaa caccgagatg gcttgcatag ttgtggttgc
2100
tgtctggaag ctgaaaagat tttccttggg gaaccaggta cgaatagggga tgtcgtcaga
2160
cacacggtca acgctgtaca tcctctccag cttcttgcgg cgaccggagg tctcaggcag
2220
aggtggctgg tccagcccaa aggcccgagg ggtggggcca ggagccagct gggcacatac
2280
cggggcactc ccttggagcc cctggcgngc tgcccgccca gctttctggc agggcctgct
2340
gacgtcctcc cggctgccac cagggctggc gcgcaggggc tggctgtgat ggtgagggtg
2400
ccgctgccgc cgcccccttca ccaccgccag ctcaatggcc tccgcctcag ggctgggcag
2460
cagggcaggc tccccagaga tgaagtacac tcgag
2495
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```
<210> 6220
<211> 179
<212> PRT
<213> Homo sapiens

<400> 6220
Phe Phe Phe Phe Phe Ser Arg Trp Arg Ile Arg Phe Asn Gly His Tyr
 1               5                  10                  15
Glu Gly Ile Val His Arg Ser Lys Pro Gly Pro Arg Pro Ser Pro Pro
           20                  25                  30
Ser Ala Gly Asn Thr Ala Arg Cys Pro Gln Thr Pro Gly Ser Ala Gln
           35                  40                  45
Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
       50                  55                  60
Cys Trp Pro Trp Thr Lys Ala Gly Ser Ser Xaa Cys Pro Val Arg Ser
65                  70                  75                  80
Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
                 85                  90                  95
Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
               100                 105                 110
Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
           115                 120                 125
Leu Val Lys Ala Glu Leu Asn Ser Ser Asn Glu Ser Ala Gly Trp Ala
           130                 135                 140
Trp Gly Asp Gly Glu Gln Ala Pro Pro Arg Ala Ser Ser Glu Gly Gly
145                 150                 155                 160
Asp Ala Ala Pro Phe Leu Pro Ala Ala Gln Thr Ala Pro Thr Gly Ser
                 165                 170                 175
Gly Ala Gly


<210> 6221
<211> 1487
<212> DNA
<213> Homo sapiens

<400> 6221
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ttagggcacc ctggatgccc cttgattcca ccctcattac ttgtcctctc tcggtgctgc
120
ctcttgttcc cttgctttgt tttgtttttca tattactccc gtatttcctg acatatctgc
180
attttctac ttactgtgtc ccgatgcagc tgctcctgtt tttcacatcc aaggtttctc
240
ctccatggca ctactgacgt tttgggctga cgaattcttt ggggacagga tggggcatgt
300
cctgtgcatt ttaggatgtt gagtagcagc cctggcctgc atccactaga tgccagttga
360
acctccccag gttctgaagc cagacacaag atgaaaaagc taactccaaa acagaaattt
420
tctgaagatt tagagtcata taagatatca gtggtaatgc aggaatcagc tgagaaactt
480
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tcagaaaagt tacataagtg taaagaattt gtggacagtt gcaggcttac tttccctact
540
agtggtgatg aatacagcag gggcttcctt caaaacctta accttattca agatcagaat
600
gcgcaaacaa ggtggaagca gggcagatat gatgaggatg gcaaaccctt caatcaaaga
660
tctttgcttt tggggcatga gcgaattctc acaagagcaa agtcttatga atgcagtgaa
720
tgtggaaaag tcattaggcg taaggcatgg tttgatcaac atcaaagaat tcactttta
780
gagaatcctt ttgagtgtaa ggtctgtggg caagccttca gacagcggtc agctcttacg
840
gtccataaac agtgtcacct gcaaaacaag ccatacagat gtcatgactg tggaaagtgt
900
tttcggcagc tcgcgtatct tgttgaacat aagaggattc acaccaaaga aaaaccttat
960
aaatgtagca aatgtgaaaa aacgtttagt cagaattcaa cccttattcg acatcaggtg
1020
atccatagtg gagaaaaacg ccataaatgc cttgagtgtg aaaagccttt ggccggcat
1080
tcaacccttc tatgtcatca acagattcac agtaaaccga cacccataa atgcagtgaa
1140
tgtggacagt cctttggtag gaatgtggat ctcattcagc atcaaagaat ccatacaaag
1200
gaggaattct ttcaatgtgg agaatgtggg aaaacgttta gttttaagag gaatctttt
1260
cgacatcagg tcattcacac tggaagccaa ctctaccaat gtgtcatatg tggaaaatct
1320
ttcaagtggc acacaagctt tattaagcac cagggcactc acaaggaca gatatccaca
1380
tgatgttaat tggaaagcag tcattggaga actagaactt ataaacctct acttcaagtg
1440
tgtatcacgt aattgtttcc atgaaaagca ataaatgtaa caaaggg
1487
```

<210> 6222
<211> 330
<212> PRT
<213> Homo sapiens

<400> 6222

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Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
1               5                   10                  15
Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
            20                  25                  30
Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
        35                  40                  45
Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
        50                  55                  60
Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
65                  70                  75                  80
Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
                85                  90                  95
Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly
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```
          100                 105                 110
Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
     115                 120                 125
Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
     130                 135                 140
Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
145                 150                 155                 160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Tyr
              165                 170                 175
Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
          180                 185                 190
Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
      195                 200                 205
Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
     210                 215                 220
Lys Ala Phe Gly Arg His Ser Thr Leu Leu Cys His Gln Gln Ile His
225                 230                 235                 240
Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
              245                 250                 255
Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
          260                 265                 270
Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
      275                 280                 285
Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
     290                 295                 300
Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
305                 310                 315                 320
Gln Gly Thr His Lys Gly Gln Ile Ser Thr
              325                 330
```

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<210> 6223
<211> 944
<212> DNA
<213> Homo sapiens

<400> 6223
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ccaccccaca ctcacaaccc cccactccca cctgcaacac ccccactccc cacccgcacc
120
ccccaacttc ccatcccccc actcctctcc attccctctc ttgcttgtgc gcataagcaa
180
gtcccactca ttgcaactgt aaccaatacc aagcatgaga acaggaacta gctccaccct
240
ctaaccccca ctccagctgc agacgccacg gagtttgtgc aggggcgcag cgctccagcc
300
atggcgcgtt cgctcgtcca cgacaccgtg ttctactgcc tgagtgtata ccaggtaaaa
360
ataagcccca cacctcagct gggggcagca tcaagcgcag aaggccatgt tggccaagga
420
gctccaggcc tcatgggtaa tatgaaccct gagggcggtg tgaaccacga gaacggcatg
480
aaccgcgatg gcggcatgat ccccgagggc ggcggtggaa accaggagcc tcggcagcag
540
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5405

ccgcagcccc cgccggagga gccggcccag gcggccatgg agggtccgca gcccgagaac
600
atgcagccac gaactcggcg cacgaagttc acgctgttgc aggtggagga gctggaaagt
660
gttttccgac acactcaata ccctgatgtg cccacaagaa gggaacttgc cgaaaactta
720
ggtgtgactg aagacaaagt gcgggtcagt acacttgaaa aagcaatttg agaggacagc
780
cattctaaaa cctgcttcag ggcattgaag gctttgaagg ctttgtcctg aacgttctaa
840
agttgttgtt tttattattg tctttttttat gttgacaaat aagttttgaa gtttgggttc
900
cttgtcggta gaaaaggaag taagctccag cttatggttc tttc
944

<210> 6224
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6224
Met Ala Arg Ser Leu Val His Asp Thr Val Phe Tyr Cys Leu Ser Val
1   5   10   15
Tyr Gln Val Lys Ile Ser Pro Thr Pro Gln Leu Gly Ala Ala Ser Ser
            20   25   30
Ala Glu Gly His Val Gly Gln Gly Ala Pro Gly Leu Met Gly Asn Met
            35   40   45
Asn Pro Glu Gly Gly Val Asn His Glu Asn Gly Met Asn Arg Asp Gly
        50   55   60
Gly Met Ile Pro Glu Gly Gly Gly Asn Gln Glu Pro Arg Gln Gln
65   70   75   80
Pro Gln Pro Pro Pro Glu Glu Pro Ala Gln Ala Ala Met Glu Gly Pro
                85   90   95
Gln Pro Glu Asn Met Gln Pro Arg Thr Arg Arg Thr Lys Phe Thr Leu
            100   105   110
Leu Gln Val Glu Glu Leu Glu Ser Val Phe Arg His Thr Gln Tyr Pro
        115   120   125
Asp Val Pro Thr Arg Arg Glu Leu Ala Glu Asn Leu Gly Val Thr Glu
        130   135   140
Asp Lys Val Arg Val Ser Thr Leu Glu Lys Ala Ile
145   150   155

<210> 6225
<211> 3851
<212> DNA
<213> Homo sapiens

<400> 6225
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agtgaatttc ggaagcagcc agtggggcat tccaggcaag gtgattttat caaatgtgtg
120
gaacagaaga cagatgcctt ggggaaacag tctgtgaaca gaggattcac taaggacaag
180

actctcagtt caatctttaa cattgagatg gtaaaagaaa aaactgcaga agaaataaaa
240
cagatttggc agcaatattt tgcagcaaaa gatacagtct acgcagttat tcctgcagaa
300
aagtttgatt tgatctggaa ccgggctcag tcctgtccaa catttctatg tgctctgcca
360
agaagggaag gttatgagtt ttttgtagga caatggacag gtactgaact ccacttcact
420
gcacttataa atattcagac ccgaggggaa gctgcagcca gccagctgat tttatatcac
480
tatcctgaac ttaaggaaga aaagggcata gtgctgatga ctgcagaaat ggattccaca
540
tttctgaatg ttgctgaggc acagtgcatc gccaaccaag ttcagctctt ctacgctact
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gatcggaaag agacctacgg gttagtggag acctttaacc tcagaccaaa tgagttcaaa
660
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780
tcgatagtct agagcccacc ccctcctcag gaactcaaga gctcagcatt tataatgagc
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900
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960
tttccttttt taagtgttcg aggttataac aagagacagc caaggaccta caagacagtt
1020
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1080
cccaaatgat gagtttgtca tctttatgaa ctcatgacag gataataagc ttgaagacct
1140
gctgtagtta gatatgggct ttaatccttc ccatgcacca gtcagctgaa caaaagcata
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1380
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1440
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1500
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1560
gtggggaaaa tatagcaata attttttttt aagtctggct tacaatgttt gttatacaaa
1620
ataatgaaat ctgagttatg tactgtccat tgtgtcaggg ctatgggctg attttatcaa
1680
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1800

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aaaggacggt ggttacacac cagccttctg aacccaaggc ccccagtatt gttgtcagct
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1920
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2160
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2220
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2520
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2580
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2820
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2940
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3300
gaaactttaa gatgcagtag catcacctaa agtgctttta aaatgcagat tctcaggcct
3360
caaccgtaca ccacccccc acacacgtac taaatcaaga atatgtgcag aaggtactgg
3420
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gaatctactt gttaatatgt gctccaaatg attctgatgt aggtaattag ccagccacac
3480
tttgagaacc actgccttat ctattcttta caaaaatgta cattgccagg tctttctttc
3540
ctgtggatgc taactatagg atatttaggt tcctctgttc tttgtctccc atagtggccc
3600
cctttgcaaa ctccaaatac attatattta tttattcttg tgtctttttt cccccactag
3660
actgtgagct ccttgagggc caggacttat ctctgttcgc agtgccaagg acatggcctg
3720
gaccatagaa gatactcagt tttttgttga ataaataggt aatatggatt tcaaccaaaa
3780
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
3840
aaaaaaaaaa a
3851

<210> 6226
<211> 246
<212> PRT
<213> Homo sapiens

<400> 6226
Xaa Ile Gln Leu Leu Arg Arg Ser Asp Pro Ala Ala Phe Glu Ser Arg
1   5   10   15
Leu Glu Lys Arg Ser Glu Phe Arg Lys Gln Pro Val Gly His Ser Arg
            20   25   30
Gln Gly Asp Phe Ile Lys Cys Val Glu Gln Lys Thr Asp Ala Leu Gly
        35   40   45
Lys Gln Ser Val Asn Arg Gly Phe Thr Lys Asp Lys Thr Leu Ser Ser
    50   55   60
Ile Phe Asn Ile Glu Met Val Lys Glu Lys Thr Ala Glu Glu Ile Lys
65   70   75   80
Gln Ile Trp Gln Gln Tyr Phe Ala Ala Lys Asp Thr Val Tyr Ala Val
                85   90   95
Ile Pro Ala Glu Lys Phe Asp Leu Ile Trp Asn Arg Ala Gln Ser Cys
            100   105   110
Pro Thr Phe Leu Cys Ala Leu Pro Arg Arg Glu Gly Tyr Glu Phe Phe
            115   120   125
Val Gly Gln Trp Thr Gly Thr Glu Leu His Phe Thr Ala Leu Ile Asn
            130   135   140
Ile Gln Thr Arg Gly Glu Ala Ala Ala Ser Gln Leu Ile Leu Tyr His
145   150   155   160
Tyr Pro Glu Leu Lys Glu Glu Lys Gly Ile Val Leu Met Thr Ala Glu
                165   170   175
Met Asp Ser Thr Phe Leu Asn Val Ala Glu Ala Gln Cys Ile Ala Asn
                180   185   190
Gln Val Gln Leu Phe Tyr Ala Thr Asp Arg Lys Glu Thr Tyr Gly Leu
            195   200   205
Val Glu Thr Phe Asn Leu Arg Pro Asn Glu Phe Lys Tyr Met Ser Val
            210   215   220
Ile Ala Glu Leu Glu Gln Ser Gly Leu Gly Ala Glu Leu Lys Cys Ala
225   230   235   240
Gln Asn Gln Asn Lys Thr

245

<210> 6227
<211> 830
<212> DNA
<213> Homo sapiens

<400> 6227
nnacagcctt cctgaaaaca cacccagcgc aggcaccagg ggtcccaccg atggacacac
60
cttggaggca gcacctacag agcggtgatt ttcgacatgg gcggagttct cattccttct
120
ccagggagag tcgctgcaga atgggaggta cagaatcgta tcccttctgg aactatatta
180
aaggccttga tggaaggtgg tgaaaatggg ccctggatga gatttatgag agcagaaata
240
acagcagagg gttttttacg agaatttggg agactttgct ctgaaatgtt aaagacctcc
300
gtgcctgtgg actcattttt ctctctgttg accagtgagc gagtggcaaa gcagttccca
360
gtgatgactg aggccataac tcaaattcgg gcaaaaggtc ttcagactgc agtcttgagc
420
aataattttt atcttcccaa ccagaaaagc ttttgcccc tggaccggaa acagtttgat
480
gtgattgtgg agtcctgcat ggaagggatc tgtaagccag accctaggat ctacaagctg
540
tgcttggagc agctcggcct gcagccctct gagtccatct ttcttgatga ccttggaaca
600
aatctaaaag aagctgccag acttggtatt cacaccatta aggttaatga cccagagact
660
gcagtaaagg aattagaagc tctcttgggt tttacattga gagtaggtgt tccaaacact
720
cggcctgtga aaagacgat ggaaattccg aaagattcct tgcagaagta cctcaaagac
780
ttactgggta tccagaccac aggcccattg gaactacttc agtttgatca
830

<210> 6228
<211> 271
<212> PRT
<213> Homo sapiens

<400> 6228
Lys His Thr Gln Arg Arg His Gln Gly Ser His Arg Trp Thr His Leu
1   5   10   15
Gly Gly Ser Thr Tyr Arg Ala Val Ile Phe Asp Met Gly Gly Val Leu
            20   25   30
Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
        35   40   45
Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Glu Gly Gly Glu Asn
    50   55   60
Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
65   70   75   80
Leu Arg Glu Phe Gly Arg Leu Cys Ser Glu Met Leu Lys Thr Ser Val

```
                    85                   90                   95
Pro Val Asp Ser Phe Phe Ser Leu Leu Thr Ser Glu Arg Val Ala Lys
                100                  105                  110
Gln Phe Pro Val Met Thr Glu Ala Ile Thr Gln Ile Arg Ala Lys Gly
            115                  120                  125
Leu Gln Thr Ala Val Leu Ser Asn Asn Phe Tyr Leu Pro Asn Gln Lys
        130                  135                  140
Ser Phe Leu Pro Leu Asp Arg Lys Gln Phe Asp Val Ile Val Glu Ser
    145                  150                  155                  160
Cys Met Glu Gly Ile Cys Lys Pro Asp Pro Arg Ile Tyr Lys Leu Cys
                165                  170                  175
Leu Glu Gln Leu Gly Leu Gln Pro Ser Glu Ser Ile Phe Leu Asp Asp
                180                  185                  190
Leu Gly Thr Asn Leu Lys Glu Ala Ala Arg Leu Gly Ile His Thr Ile
            195                  200                  205
Lys Val Asn Asp Pro Glu Thr Ala Val Lys Glu Leu Glu Ala Leu Leu
        210                  215                  220
Gly Phe Thr Leu Arg Val Gly Val Pro Asn Thr Arg Pro Val Lys Lys
    225                  230                  235                  240
Thr Met Glu Ile Pro Lys Asp Ser Leu Gln Lys Tyr Leu Lys Asp Leu
                245                  250                  255
Leu Gly Ile Gln Thr Thr Gly Pro Leu Glu Leu Leu Gln Phe Asp
            260                  265                  270
```

<210> 6229
<211> 3105
<212> DNA
<213> Homo sapiens

<400> 6229
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nngagcggcc gcccgggcag gtaggaggct gagtcctggc cgcgggccgg ggccggggcg
60
ccgctggcag gagcgcttgg ggatcctcca agggcgacca tggccttgct gggtaagcgc
120
tgtgacgtcc ccaccaacgg ctgcggaccc gaccgctgga actccgcgtt cacccgcaaa
180
gacgagatca tcaccagcct cgtgtctgcc ttagactcca tgtgctcagc gctgtccaaa
240
ctgaacgccg aggtggcctg tgtcgccgtg cacgatgaga gcgcctttgt ggtgggcaca
300
gagaagggga gaatgttcct gaatgcccgg aaggagctac agtcagactt cctcaggttc
360
tgccgagggc ccccgtggaa ggatccggag gcagagcacc ccaagaaggt gcagcggggc
420
gagggtggag gccgtagcct ccctcggtcc tccctggaac atggctcaga tgtgtacctt
480
ctgcggaaga tggtagagga ggtgtttgat gttctttata gcgaggccct gggaagggcc
540
agtgtggtgc cactgcccta tgagaggctg ctcagggagc agggctgct ggccgtgcag
600
gggctgcccg aaggcctggc cttccgaagg ccagccgagt atgaccccaa ggccctcatg
660
gccatcctgg aacacagcca ccgcatccgc ttcaagctca agaggccact tgaggatggc
720
```

```
gggcggggact cgaaggcccct ggtggagctg aacggtgtct ccctgattcc caaggggtca
780
cgggactgtg gcctgcatgg ccaggcccccc aaggtgccac cccaggacct gcccccaacc
840
gccacctcct cctccatggc cagcttcctg tacagcacgg cgctccccaa ccacgccatc
900
cgagagctca agcaggaagc accttcctgc ccccttgccc ccagcgacct gggcctgagt
960
cggcccatgc cagagcccaa ggccaccggt gcccaagact tctccgactg ttgtggacag
1020
aagcccactg ggcctggtgg gcctctcatc cagaacgtcc atgcctccaa gcgcattctc
1080
ttctccatcg tccatgacaa gtcagagaag tgggacgcct tcataaagga aaccgaggac
1140
atcaacacgc tccgggagtg tgtgcagatc ctgtttaaca gcagatatgc ggaagccctg
1200
ggcctgggca acatggtccc cgtgccctac cggaagattg cctgtgaccc ggaggctgtg
1260
gagatcgtgg gcatcccgga caagatcccc ttcaagcgcc cctgcactta cggagtcccc
1320
aagctgaagc ggatcctgga ggagcgccat agtatccact tcatcattaa gaggatgttt
1380
gatgagcgaa ttttcacagg gaacaagttt accaaagaca ccacgaagct ggagccagcc
1440
agcccgccag aggacacctc tgcagaggtc tctagggcca ccgtccttga ccttgctggg
1500
aatgctcggt cagacaaggg cagcatgtct gaagactgtg ggccaggaac ctccggggag
1560
ctgggcggggc tgaggccgat caaaattgag ccagaggatc tggacatcat tcaggtcacc
1620
gtcccagacc cctcgccaac ctctgaggaa atgacagact cgatgcctgg gcacctgcca
1680
tcggaggatt ctggttatgg gatggagatg ctgacagaca aaggtctgag tgaggacgcg
1740
cggcccgagg agaggcccgt ggaggacagc cacggtgacg tgatccggcc cctgcggaag
1800
caggtggagc tgctcttcaa cacacgatac gccaaggcca ttggcatctc ggagcccgtc
1860
aaggtgccgt actccaagtt tctgatgcac ccggaggagc tgtttgtggt gggactgcct
1920
gaaggcatct ccctccgcag gcccaactgc ttcgggatcg ccaagctccg gaagattctg
1980
gaggccagca acagcatcca gtttgtcatc aagaggcccg agctgctcac tgagggagtc
2040
aaagagccca tcgtggatag tcaagagagg gattccgggg accctctggt ggacgagagc
2100
ctgaagagac agggctttca agaaaattat gacgcgaggc tctcacggat cgacatcgcc
2160
aacacactaa gggagcaggt ccaggacctt ttcaataaga aatacgggga agccttgggc
2220
atcaagtacc cggtccaggt cccctacaag cggatcaaga gtaaccccgg ctccgtgatc
2280
atcgaggggc tgccccccagg aatcccgttc cgaaagccct gtaccttcgg ctcccagaac
2340
```

```
ctggagagga ttcttgctgt ggctgacaag atcaagttca cagtcaccag gcctttccaa
2400
ggactcatcc caaagcctga tgaagatgac gccaacagac tcggggagaa ggtgatcctg
2460
cgggagcagg tgaaggaact cttcaacgag aaatacggtg aggccctggg cctgaaccgg
2520
ccggtgctgg tcccttataa actaatccgg gacagcccag acgccgtgga ggtcacgggt
2580
ctgcctgatg acatcccctt ccggaacccc aacacgtacg acatccaccg gctggagaag
2640
atcctgaagg cccgagagca tgtccgcatg gtcatcatta accagctcca acccttttgca
2700
gaaatctgca atgatgccaa ggtgccagcc aaagacagca gcattcccaa gcgcaagaga
2760
aagcgggtct cggaaggaaa ttccgtctcc tcttcctcct cgtcttcctc ttcctcgtcc
2820
tctaacccgg attcagtggc atcggccaac cagatctcac tcgtgcaatg gccaatgtac
2880
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2940
gtactgaatc aggacctcac tcagaaagac taaaggaaat gtaatttatg tacaaaatgt
3000
atattcggat atgtatcgat gcctttttagt ttttccaatg attttttacac tatattcctg
3060
ccaccaaggc cttttttaaat aagtaaaaaa aaaaaaaaaa aaaaa
3105
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```
<210> 6230
<211> 944
<212> PRT
<213> Homo sapiens

<400> 6230
Met Ala Leu Leu Gly Lys Arg Cys Asp Val Pro Thr Asn Gly Cys Gly
1               5                   10                  15
Pro Asp Arg Trp Asn Ser Ala Phe Thr Arg Lys Asp Glu Ile Ile Thr
            20                  25                  30
Ser Leu Val Ser Ala Leu Asp Ser Met Cys Ser Ala Leu Ser Lys Leu
        35                  40                  45
Asn Ala Glu Val Ala Cys Val Ala Val His Asp Glu Ser Ala Phe Val
    50                  55                  60
Val Gly Thr Glu Lys Gly Arg Met Phe Leu Asn Ala Arg Lys Glu Leu
65                  70                  75                  80
Gln Ser Asp Phe Leu Arg Phe Cys Arg Gly Pro Pro Trp Lys Asp Pro
                85                  90                  95
Glu Ala Glu His Pro Lys Lys Val Gln Arg Gly Glu Gly Gly Gly Arg
            100                 105                 110
Ser Leu Pro Arg Ser Ser Leu Glu His Gly Ser Asp Val Tyr Leu Leu
        115                 120                 125
Arg Lys Met Val Glu Glu Val Phe Asp Val Leu Tyr Ser Glu Ala Leu
    130                 135                 140
Gly Arg Ala Ser Val Val Pro Leu Pro Tyr Glu Arg Leu Leu Arg Glu
145                 150                 155                 160
Pro Gly Leu Leu Ala Val Gln Gly Leu Pro Glu Gly Leu Ala Phe Arg
```

```
                          165                    170                    175
Arg Pro Ala Glu Tyr Asp Pro Lys Ala Leu Met Ala Ile Leu Glu His
                180                    185                    190
Ser His Arg Ile Arg Phe Lys Leu Lys Arg Pro Leu Glu Asp Gly Gly
        195                    200                    205
Arg Asp Ser Lys Ala Leu Val Glu Leu Asn Gly Val Ser Leu Ile Pro
    210                    215                    220
Lys Gly Ser Arg Asp Cys Gly Leu His Gly Gln Ala Pro Lys Val Pro
225                    230                    235                    240
Pro Gln Asp Leu Pro Pro Thr Ala Thr Ser Ser Ser Met Ala Ser Phe
                245                    250                    255
Leu Tyr Ser Thr Ala Leu Pro Asn His Ala Ile Arg Glu Leu Lys Gln
                260                    265                    270
Glu Ala Pro Ser Cys Pro Leu Ala Pro Ser Asp Leu Gly Leu Ser Arg
        275                    280                    285
Pro Met Pro Glu Pro Lys Ala Thr Gly Ala Gln Asp Phe Ser Asp Cys
        290                    295                    300
Cys Gly Gln Lys Pro Thr Gly Pro Gly Gly Pro Leu Ile Gln Asn Val
305                    310                    315                    320
His Ala Ser Lys Arg Ile Leu Phe Ser Ile Val His Asp Lys Ser Glu
                325                    330                    335
Lys Trp Asp Ala Phe Ile Lys Glu Thr Glu Asp Ile Asn Thr Leu Arg
                340                    345                    350
Glu Cys Val Gln Ile Leu Phe Asn Ser Arg Tyr Ala Glu Ala Leu Gly
        355                    360                    365
Leu Gly Asn Met Val Pro Val Pro Tyr Arg Lys Ile Ala Cys Asp Pro
        370                    375                    380
Glu Ala Val Glu Ile Val Gly Ile Pro Asp Lys Ile Pro Phe Lys Arg
385                    390                    395                    400
Pro Cys Thr Tyr Gly Val Pro Lys Leu Lys Arg Ile Leu Glu Glu Arg
                405                    410                    415
His Ser Ile His Phe Ile Ile Lys Arg Met Phe Asp Glu Arg Ile Phe
                420                    425                    430
Thr Gly Asn Lys Phe Thr Lys Asp Thr Thr Lys Leu Glu Pro Ala Ser
        435                    440                    445
Pro Pro Glu Asp Thr Ser Ala Glu Val Ser Arg Ala Thr Val Leu Asp
        450                    455                    460
Leu Ala Gly Asn Ala Arg Ser Asp Lys Gly Ser Met Ser Glu Asp Cys
465                    470                    475                    480
Gly Pro Gly Thr Ser Gly Glu Leu Gly Gly Leu Arg Pro Ile Lys Ile
                485                    490                    495
Glu Pro Glu Asp Leu Asp Ile Ile Gln Val Thr Val Pro Asp Pro Ser
                500                    505                    510
Pro Thr Ser Glu Glu Met Thr Asp Ser Met Pro Gly His Leu Pro Ser
        515                    520                    525
Glu Asp Ser Gly Tyr Gly Met Glu Met Leu Thr Asp Lys Gly Leu Ser
        530                    535                    540
Glu Asp Ala Arg Pro Glu Glu Arg Pro Val Glu Asp Ser His Gly Asp
545                    550                    555                    560
Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe Asn Thr Arg
                565                    570                    575
Tyr Ala Lys Ala Ile Gly Ile Ser Glu Pro Val Lys Val Pro Tyr Ser
                580                    585                    590
Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly Leu Pro Glu
```

```
          595                    600                    605
Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala Lys Leu Arg
     610                    615                    620
Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile Lys Arg Pro
625                    630                    635                    640
Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
               645                    650                    655
Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
               660                    665                    670
Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
          675                    680                    685
Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
     690                    695                    700
Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
705                    710                    715                    720
Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
               725                    730                    735
Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
               740                    745                    750
Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
          755                    760                    765
Leu Ile Pro Lys Pro Asp Glu Asp Asp Ala Asn Arg Leu Gly Glu Lys
     770                    775                    780
Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
785                    790                    795                    800
Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
               805                    810                    815
Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
               820                    825                    830
Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
          835                    840                    845
Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
     850                    855                    860
Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
865                    870                    875                    880
Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
               885                    890                    895
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
          900                    905                    910
Val Ala Ser Ala Asn Gln Ile Ser Leu Val Gln Trp Pro Met Tyr Met
     915                    920                    925
Val Asp Tyr Ala Gly Leu Asn Val Gln Leu Pro Gly Pro Leu Asn Tyr
     930                    935                    940
```

<210> 6231
<211> 471
<212> DNA
<213> Homo sapiens

<400> 6231
tgatcattgg gatcacttgt tggaatggcc gggttcctgt gcaggcacct agcaaatgtc
60
taccaatgac aggccctact cacagccact gcactccagc ttgggcgaca gaacgaggcc
120

```
ttgccttttt aaaaaaaaaa aaaaggctca aaaaaagagt atgctgggcc aaaaatctgg
180
cccctcaggc ctcctgacct ggaggagaaa aaggggcccg aagccccccg ttgcccccat
240
ctccatatgg aatggcacaa cccctcgagg ggaacccccc cctaaccata gttctaaaaa
300
ggggacaaaa aaatgggcgc tggatttttc aacgccggaa acccaattcc caccccctgg
360
ccggccgttc ttagggattc caacttggga cccaacctgg gcgtattctg ggccttactt
420
gtttcttgtg ggaattggta ttccgttccc atttcccccca ccttccaacc c
471
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<210> 6232
<211> 138
<212> PRT
<213> Homo sapiens

<400> 6232

Met	Ser	Thr	Asn	Asp	Arg	Pro	Tyr	Ser	Gln	Pro	Leu	His	Ser	Ser	Leu
1				5					10					15	
Gly	Asp	Arg	Thr	Arg	Pro	Cys	Leu	Phe	Lys	Lys	Lys	Lys	Ala	Gln
			20					25					30	
Lys	Lys	Ser	Met	Leu	Gly	Gln	Lys	Ser	Gly	Pro	Ser	Gly	Leu	Leu	Thr
			35				40					45			
Trp	Arg	Arg	Lys	Arg	Gly	Pro	Lys	Pro	Pro	Val	Ala	Pro	Ile	Ser	Ile
	50					55					60				
Trp	Asn	Gly	Thr	Thr	Pro	Arg	Gly	Glu	Pro	Pro	Pro	Asn	His	Ser	Ser
65					70				75					80	
Lys	Lys	Gly	Thr	Lys	Lys	Trp	Ala	Leu	Asp	Phe	Ser	Thr	Pro	Glu	Thr
				85				90					95		
Gln	Phe	Pro	Pro	Pro	Gly	Arg	Pro	Phe	Leu	Gly	Ile	Pro	Thr	Trp	Asp
			100					105					110		
Pro	Thr	Trp	Ala	Tyr	Ser	Gly	Pro	Tyr	Leu	Phe	Leu	Val	Gly	Ile	Gly
			115				120					125			
Ile	Pro	Phe	Pro	Phe	Pro	Pro	Ser	Asn							
	130					135									
```

<210> 6233
<211> 894
<212> DNA
<213> Homo sapiens

<400> 6233
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acgcgtgaag ggaaaaagag aaggcgctgt cccgctcttg ctacggtggc ctggaggagt
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ggcgaaaccg gaacagagaa tttatcactt ctgggactca cagtcgtgat gtctttcaag
120
agggaaggag acgattggag tcaactcaat gtgctcaaaa aaagaagagt cggggacctc
180
ctagccagtt acattccaga ggatgaggcg ctgatgcttc gggatggacg ctttgcttgt
240
gccatctgcc cccatcgacc ggtactggac accctggcca tgctgactgc ccaccgtgca
300
```

```
ggcaagaaac atctgtccag cttgcagctt ttctatggca agaagcagcc gggaaaggaa
360
agaaagcaga atccaaaaca tcagaatgaa ttgagaaggg aagaaaccaa agctgaggct
420
cctctgctaa ctcagacacg acttatcacc cagagtgctc tgcacagagc tccccactat
480
aacagttgct gccgccggaa gtacagacca gaagcccctg gtccctctgt ctcccttttcc
540
cctatgccac cctcagaggt caaactccaa agtgggaaga tcagtaggga acctgaacct
600
gcggctggcc cacaggccga ggagtcagca actgtctcag cccctgcacc catgagcccc
660
acaagaagac gagccctgga ccattatctc acccttcgaa gctctggatg gatcccagat
720
ggacgaggtc gatgggtaaa agatgaaaat gttgagtttg actctgatga ggaggaacca
780
cctgatctcc ccttggactg ataccctttt cccattcatt cacaaataaa ttacaatggg
840
tgctgagaac ttaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
894
```

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<210> 6234
<211> 230
<212> PRT
<213> Homo sapiens

<400> 6234
Met Ser Phe Lys Arg Glu Gly Asp Asp Trp Ser Gln Leu Asn Val Leu
 1               5                  10                  15
Lys Lys Arg Arg Val Gly Asp Leu Leu Ala Ser Tyr Ile Pro Glu Asp
                20                  25                  30
Glu Ala Leu Met Leu Arg Asp Gly Arg Phe Ala Cys Ala Ile Cys Pro
            35                  40                  45
His Arg Pro Val Leu Asp Thr Leu Ala Met Leu Thr Ala His Arg Ala
        50                  55                  60
Gly Lys Lys His Leu Ser Ser Leu Gln Leu Phe Tyr Gly Lys Lys Gln
65                  70                  75                  80
Pro Gly Lys Glu Arg Lys Gln Asn Pro Lys His Gln Asn Glu Leu Arg
                85                  90                  95
Arg Glu Glu Thr Lys Ala Glu Ala Pro Leu Leu Thr Gln Thr Arg Leu
                100                 105                 110
Ile Thr Gln Ser Ala Leu His Arg Ala Pro His Tyr Asn Ser Cys Cys
            115                 120                 125
Arg Arg Lys Tyr Arg Pro Glu Ala Pro Gly Pro Ser Val Ser Leu Ser
        130                 135                 140
Pro Met Pro Pro Ser Glu Val Lys Leu Gln Ser Gly Lys Ile Ser Arg
145                 150                 155                 160
Glu Pro Glu Pro Ala Ala Gly Pro Gln Ala Glu Glu Ser Ala Thr Val
                165                 170                 175
Ser Ala Pro Ala Pro Met Ser Pro Thr Arg Arg Arg Ala Leu Asp His
                180                 185                 190
Tyr Leu Thr Leu Arg Ser Ser Gly Trp Ile Pro Asp Gly Arg Gly Arg
            195                 200                 205
Trp Val Lys Asp Glu Asn Val Glu Phe Asp Ser Asp Glu Glu Glu Pro
```

```
      210                    215                  220
Pro Asp Leu Pro Leu Asp
225                    230


<210> 6235
<211> 3427
<212> DNA
<213> Homo sapiens

<400> 6235
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60
gtccgggact ttccgttcga gctcatcccg gagcccccag agggcggcct gcccgggccc
120
tgggccctgc accgcggccg caagaaggcc acaggcagcc ccgtgtccat cttcgtctat
180
gatgtgaagc ctggcgcgga agagcagacc caggtggcca aagctgcctt caagcgcttc
240
aaaactctac ggcaccccaa catcctggct tacatcgatg gactggagac agaaaaatgc
300
ctccacgtcg tgacagaggc tgtgaccccg ttgggaatat acctcaaggc gagagtggag
360
gctggtggcc tgaaggagct ggagatctcc tgggggctac accagatcgt gaaagccctc
420
agcttcctgg tcaacgactg cagcctcatc cacaacaatg tctgcatggc cgccgtgttc
480
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540
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600
ttggctgaca gcagtggcag agtggtcaga gagaagtggt cagcagacat gtggcgcttg
660
ggctgcctca tttgggaagt cttcaatggg cccctacctc gggcagcagc cctacgcaac
720
cctgggaaga tccccaaaac gctggtgccc cattactgtg agctggtggg agcaaacccc
780
aaagtacgtc ccaacccagc ccgcttcctg cagaactgcc gggcacctgg tggcttcatg
840
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900
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1140
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1320
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1860
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1920
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1980
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2100
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2160
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2280
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2340
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2400
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2460
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2520
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2580
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2820
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2880
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2940
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caccgaggtc tgggccgagg gcggcgtcgg cggcgtcagc ggcggcgctg gggaacgcag
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3060
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3120
tcgatatcca cgcagcgggc gcgggaggcg tcgagctgga agccgccggg acactcgcac
3180
acggcgccgc ccggccgcgg cacgcagcgg ccactcacgc agcgacactc gtctgaatcc
3240
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3300
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gccggcc
3427


<210> 6236
<211> 820
<212> PRT
<213> Homo sapiens

<400> 6236
Pro Arg Ala Pro Glu Pro Ala Ala Ala Val Gly Thr Met Trp Phe Phe
1               5                   10                  15
Ala Arg Asp Pro Val Arg Asp Phe Pro Phe Glu Leu Ile Pro Glu Pro
            20                  25                  30
Pro Glu Gly Gly Leu Pro Gly Pro Trp Ala Leu His Arg Gly Arg Lys
        35                  40                  45
Lys Ala Thr Gly Ser Pro Val Ser Ile Phe Val Tyr Asp Val Lys Pro
    50                  55                  60
Gly Ala Glu Glu Gln Thr Gln Val Ala Lys Ala Ala Phe Lys Arg Phe
65                  70                  75                  80
Lys Thr Leu Arg His Pro Asn Ile Leu Ala Tyr Ile Asp Gly Leu Glu
                85                  90                  95
Thr Glu Lys Cys Leu His Val Val Thr Glu Ala Val Thr Pro Leu Gly
            100                 105                 110
Ile Tyr Leu Lys Ala Arg Val Glu Ala Gly Gly Leu Lys Glu Leu Glu
        115                 120                 125
Ile Ser Trp Gly Leu His Gln Ile Val Lys Ala Leu Ser Phe Leu Val
    130                 135                 140
Asn Asp Cys Ser Leu Ile His Asn Asn Val Cys Met Ala Ala Val Phe
145                 150                 155                 160
Val Asp Arg Ala Gly Glu Trp Lys Leu Gly Gly Leu Asp Tyr Met Tyr
                165                 170                 175
Ser Ala Gln Gly Asn Gly Gly Gly Pro Pro Arg Lys Gly Ile Pro Glu
            180                 185                 190
Leu Glu Gln Tyr Asp Pro Pro Glu Leu Ala Asp Ser Ser Gly Arg Val
        195                 200                 205
Val Arg Glu Lys Trp Ser Ala Asp Met Trp Arg Leu Gly Cys Leu Ile
    210                 215                 220
Trp Glu Val Phe Asn Gly Pro Leu Pro Arg Ala Ala Ala Leu Arg Asn
```

```
225                   230                   235                   240
Pro Gly Lys Ile Pro Lys Thr Leu Val Pro His Tyr Cys Glu Leu Val
                245                   250                   255
Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe Leu Gln Asn
            260                   265                   270
Cys Arg Ala Pro Gly Gly Phe Met Ser Asn Arg Phe Val Glu Thr Asn
            275                   280                   285
Leu Phe Leu Glu Glu Ile Gln Ile Lys Glu Pro Ala Glu Lys Gln Lys
        290                   295                   300
Phe Phe Gln Glu Leu Ser Lys Ser Leu Asp Ala Phe Pro Glu Asp Phe
305                   310                   315                   320
Cys Arg His Lys Val Leu Pro Gln Leu Leu Thr Ala Phe Glu Phe Gly
                325                   330                   335
Asn Ala Gly Ala Val Val Leu Thr Pro Leu Phe Lys Val Gly Lys Phe
            340                   345                   350
Leu Ser Ala Glu Glu Tyr Gln Gln Lys Ile Ile Pro Val Val Val Lys
        355                   360                   365
Met Phe Ser Ser Thr Asp Arg Ala Met Arg Ile Arg Leu Leu Gln Gln
        370                   375                   380
Met Glu Gln Phe Ile Gln Tyr Leu Asp Glu Pro Thr Val Asn Thr Gln
385                   390                   395                   400
Ile Phe Pro His Val Val His Gly Phe Leu Asp Thr Asn Pro Ala Ile
                405                   410                   415
Arg Glu Gln Thr Val Lys Ser Met Leu Leu Leu Ala Pro Lys Leu Asn
            420                   425                   430
Glu Ala Asn Leu Asn Val Glu Leu Met Lys His Phe Ala Arg Leu Gln
        435                   440                   445
Ala Lys Asp Glu Gln Gly Pro Ile Arg Cys Asn Thr Thr Val Cys Leu
    450                   455                   460
Gly Lys Ile Gly Ser Tyr Leu Ser Ala Ser Thr Arg His Arg Val Leu
465                   470                   475                   480
Thr Ser Ala Phe Ser Arg Ala Thr Arg Asp Pro Phe Ala Pro Ser Arg
                485                   490                   495
Val Ala Gly Val Leu Gly Phe Ala Ala Thr His Asn Leu Tyr Ser Met
            500                   505                   510
Asn Asp Cys Ala Gln Lys Ile Leu Pro Val Leu Cys Gly Leu Thr Val
        515                   520                   525
Asp Pro Glu Lys Ser Val Arg Asp Gln Ala Phe Lys Ala Ile Arg Ser
    530                   535                   540
Phe Leu Ser Lys Leu Glu Ser Val Ser Glu Asp Pro Thr Gln Leu Glu
545                   550                   555                   560
Glu Val Glu Lys Asp Val His Ala Ala Ser Ser Pro Gly Met Gly Gly
            565                   570                   575
Ala Ala Ala Ser Trp Ala Gly Trp Ala Val Thr Gly Val Ser Ser Leu
            580                   585                   590
Thr Ser Lys Leu Ile Arg Ser His Pro Thr Thr Ala Pro Thr Glu Thr
        595                   600                   605
Asn Ile Pro Gln Arg Pro Thr Pro Glu Gly Val Pro Ala Pro Ala Pro
        610                   615                   620
Thr Pro Val Pro Ala Thr Pro Thr Thr Ser Gly His Trp Glu Thr Gln
625                   630                   635                   640
Glu Glu Asp Lys Asp Thr Ala Glu Asp Ser Ser Thr Ala Asp Arg Trp
                645                   650                   655
Asp Asp Glu Asp Trp Gly Ser Leu Glu Gln Glu Ala Glu Ser Val Leu
```

5421

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                      660                   665                   670
Ala Gln Gln Asp Asp Trp Ser Thr Gly Gly Gln Val Ser Arg Ala Ser
            675                   680                   685
Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
            690                   695                   700
Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
705                   710                   715                   720
Pro Ser Ser Gln Glu Pro Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
                      725                   730                   735
Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
            740                   745                   750
Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
            755                   760                   765
Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
            770                   775                   780
Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Arg Glu Met Glu Ala
785                   790                   795                   800
Lys Arg Ala Glu Arg Lys Val Ala Lys Gly Pro Met Lys Leu Gly Ala
                      805                   810                   815
Arg Lys Leu Asp
            820


<210> 6237
<211> 494
<212> DNA
<213> Homo sapiens

<400> 6237
cggcctggga ccatgggcgg acatgttccc gatttgaggt gaaacatgaa gagaaaatag
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aatacttaat aatgcttttc cgcaaccgct tcttgctgct gctggccctg gctgcgctgc
120
tggcctttgt gagcctcagc ctgcagttct tccacctgat cccggtgtcg actcctaaga
180
atggaatgag tagcaagagt cgaaagagaa tcatgcccga ccctgtgacg gagccccctg
240
tgacagaccc cgtttatgaa gctcttttgt actgcaacat ccccagcgtg gccgagcgca
300
gcatggaagg tcatgccccg catcatttta agctggtctc agtgcatgtg ttcattcgcc
360
acggagacag gtacccactg tatgtcattc ccaaaacaaa gcgaccagaa attgactgca
420
ctctggtggc taacaggaaa ccgtatcacc caaaactgga agctttcatt agtcacatgt
480
tgagaggatc cgga
494


<210> 6238
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6238
Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala Leu
```

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 1              5                    10              15
Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val
            20                   25              30
Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met
        35                   40              45
Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala
    50                   55              60
Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly
65                   70              75              80
His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg
            85                   90              95
His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro
            100              105             110
Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys
        115              120             125
Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly
        130              135             140
```

```
<210> 6239
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6239
nnggcgggtt aaagagcgcg ttgctggctg ggcacgcgtg cttgagaagg ttcaatggcg
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tggcagggac tagcggccga gttcctgcag gtgccggcgg tgacgcgggc ttacaccgca
120
gcctgtgtcc tcaccaccgc cgcggtgcag ctggagctcc tcagcccctt tcaactctac
180
ttcaacccgc accttgtgtt ccggaagttc caggtctgga ggctcgtcac caacttcctc
240
ttcttcgggc ccctgggatt cagcttcttc ttcaacatgc tcttcgtgtt ccgctactgc
300
cgcatgctgg aagagggctc cttccgcggc cgcacggccg acttcgtctt catgtttctc
360
ttcggggggcg tccttatgac cctgctggga ctcctgggca gcctgttctt cctgggccag
420
gccctcatgg ccatgctggt gtacgtgtgg agccgccgca gccctcgggt gagggtcaac
480
ttcttcggcc tgctcacttt ccaggcaccg ttcctgcctt gggcgctcat gggcttctcg
540
ctgctgctgg gcaactccat cctcgtggac ctgctgggga ttgcggtggg ccatatctac
600
tacttcctgg aggacgtctt ccccaaccag cctggaggca gaggctcct gcagacccct
660
ggcttcctaa agctgctcct ggatgcccct gcagaagacc ccaattacct gcccctccct
720
gaggaacagc caggacccca tctgccaccc ccgcagcagt gaccccacc cagggccagg
780
cctaagaggc ttctggcagc ttccatccta cccatgaccc ctacttgggg cagaaaaaac
840
ccatcctaaa ggctgggccc atgcaagggc ccacctgaat aaacagaatg agctgcaaaa
900
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aaaaaaaaaa a
911

<210> 6240
<211> 235
<212> PRT
<213> Homo sapiens

<400> 6240
Met Ala Trp Gln Gly Leu Ala Ala Glu Phe Leu Gln Val Pro Ala Val
 1   5   10   15
Thr Arg Ala Tyr Thr Ala Ala Cys Val Leu Thr Thr Ala Ala Val Gln
            20   25   30
Leu Glu Leu Leu Ser Pro Phe Gln Leu Tyr Phe Asn Pro His Leu Val
        35   40   45
Phe Arg Lys Phe Gln Val Trp Arg Leu Val Thr Asn Phe Leu Phe Phe
    50   55   60
Gly Pro Leu Gly Phe Ser Phe Phe Phe Asn Met Leu Phe Val Phe Arg
65   70   75   80
Tyr Cys Arg Met Leu Glu Glu Gly Ser Phe Arg Gly Arg Thr Ala Asp
                85   90   95
Phe Val Phe Met Phe Leu Phe Gly Gly Val Leu Met Thr Leu Leu Gly
            100   105   110
Leu Leu Gly Ser Leu Phe Phe Leu Gly Gln Ala Leu Met Ala Met Leu
        115   120   125
Val Tyr Val Trp Ser Arg Arg Ser Pro Arg Val Arg Val Asn Phe Phe
    130   135   140
Gly Leu Leu Thr Phe Gln Ala Pro Phe Leu Pro Trp Ala Leu Met Gly
145   150   155   160
Phe Ser Leu Leu Leu Gly Asn Ser Ile Leu Val Asp Leu Leu Gly Ile
                165   170   175
Ala Val Gly His Ile Tyr Tyr Phe Leu Glu Asp Val Phe Pro Asn Gln
            180   185   190
Pro Gly Gly Lys Arg Leu Leu Gln Thr Pro Gly Phe Leu Lys Leu Leu
        195   200   205
Leu Asp Ala Pro Ala Glu Asp Pro Asn Tyr Leu Pro Leu Pro Glu Glu
    210   215   220
Gln Pro Gly Pro His Leu Pro Pro Pro Gln Gln
225   230   235

<210> 6241
<211> 1515
<212> DNA
<213> Homo sapiens

<400> 6241
tgcggccgct gccttggacc cagcgccacc cgcacacggc gctccgctag ccaggccggg
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agcaagagcc aggcggtgga gaagccgccg tcggagaagc cgcggctgag gcgctcgtcg
120
cgccgggccc caggaggagg gccggggag ccgccgccgc ctgagctggc gttgctcccg
180
ccaccgccgc cgccgccgcc gactcccgcg accccgacgt cctcggcgtc caacctggac
240

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ctgggcgagc agcgggacgc ctgggagacg ttccagaagc ggcagaagct tacctccgag
300
ggtgccgcca agctcctgct agacaccttt gaataccagg gcctggtgaa gcacacagga
360
ggctgccact gtggagcagt tcgttttgaa gtttgggcct cagcagactt gcatatattt
420
gactgcaatt gcagcatttg caagaagaag cagaatagac acttcattgt tccagcttct
480
cgcttcaagc tcctgaaggg agctgagcac ataacgactt acacgttcaa tactcacaaa
540
gcccagcata ccttctgtaa gagatgtggc gttcagagct ctatactcc acgatcaaac
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660
actgaggaat tcaatggcag cgattgggag aaggccatga agagcacaa gaccatcaag
720
aacatgtcta agagtgagc ttctgcctct cctgccctga aaggaggaa tgattggggc
780
cagcaacttt gctctccctg ccgtgcctcg gtggtgctcc tgaatgtggc tgacctgggc
840
tgctggttcc gttgactagg gtcatcttga tctctgcagt ttgctccagc taccagtttc
900
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960
ctcttcccaa cttttgtgtg atccagcaga gcatgtgaga ctctttgata tgcaccttca
1020
tgtattatct tgttcagttc tctgaggttg ggatcattat tatttcccat tttgcagatg
1080
agagaattga ggcagagaaa ggttcagcac cttgcctttg gttacacagc tggtcattct
1140
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1200
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1260
gcttttgttc gtaggacaat tttaagacat caggttcttg aatgttttgt gtttttttaa
1320
gtctcagatt tatcttccta cttcctactt ctccaaaaag actgagagct gacatatttg
1380
attgtaagct ctttgaggca gagttcttgt aatcgtctct gtataaaaca gtgcccaccc
1440
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1500
ctagacccac attct
1515


<210> 6242
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6242
Cys Gly Arg Cys Leu Gly Pro Ser Ala Thr Arg Thr Arg Arg Ser Ala
1               5                   10                  15
Ser Gln Ala Gly Ser Lys Ser Gln Ala Val Glu Lys Pro Pro Ser Glu
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                 20                      25                      30
Lys Pro Arg Leu Arg Arg Ser Ser Arg Arg Ala Pro Gly Gly Gly Pro
            35                      40                      45
Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro Pro
        50                      55                      60
Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
65                      70                      75                      80
Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
                85                      90                      95
Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Leu Asp Thr Phe Glu Tyr
            100                     105                     110
Gln Gly Leu Val Lys His Thr Gly Gly Cys His Cys Gly Ala Val Arg
        115                     120                     125
Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
    130                     135                     140
Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
145                     150                     155                     160
Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
                165                     170                     175
Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
            180                     185                     190
Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
            195                     200                     205
His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
    210                     215                     220
Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
225                     230                     235                     240
Asn Met Ser Lys Glu
                245
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<210> 6243
<211> 326
<212> DNA
<213> Homo sapiens

<400> 6243
gcgcgccagg gagagaagga gaggaactga tggaacaaag tcaaagagga agtgggataa
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gataggacat aaggacacgt ggagcattca gatccagaga ggatgatcag cacctcttcc
120
tctgagacca gagggacaaa ccataatgag tgaagagatg aggacattct taaagtggag
180
ctagcaaagc tgggaatggc cttccacaag aggaaaccta agactggacc cagaatagta
240
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300
ctgtagggat gcattcctgg agagtg
326

<210> 6244
<211> 104
<212> PRT
<213> Homo sapiens

<400> 6244
Met His Pro Tyr Arg Ile Tyr Pro Ala Ala Phe Pro Glu Leu Ser His
1   5   10   15
Leu Pro Gln Val Pro Lys Pro Thr Phe Thr Ile Leu Gly Pro Val Leu
                20   25   30
Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
            35   40   45
Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
        50   55   60
Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
65   70   75   80
Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
                85   90   95
Phe Leu Ser Phe Ser Pro Trp Arg
            100

<210> 6245
<211> 6609
<212> DNA
<213> Homo sapiens

<400> 6245
tctggagtct gcctcatttt gaatatatct ctctggtctt tgggctgctg attttaaaat
60
aagttcttgg ttcaagtcaa cctgttactt gccattggat ggtaatattt gacttttcaa
120
tcttatcctg attgataagc ggactcccag tttttgcctt ctctttgccc cagaatttgg
180
agacctcggg cctctcccct gcttttctcc tctttcctag attttctcaa gtgtccccgt
240
ttagtcttcc ctcctcagct tggctcctga aacatttgc tgctgctttt gtttttgtag
300
gtgttggaca atcagataaa gaaagacctg gctgacaagg agacactgga gaacatgatg
360
cagagacacg aggaggaggc ccatgagaag ggcaaaattc tcagcgaaca gaaggcgatg
420
atcaatgcta tggattccaa gatcagatcc ctggaacaga ggattgtgga actgtctgaa
480
gccaataaac ttgcagcaaa tagcagtctt tttacccaaa ggaacatgaa ggcccaagaa
540
gagatgattt ctgaactcag gcaacagaaa ttttacctgg agacacaggc tgggaagttg
600
gaggcccaga accgaaaact ggaggagcag ctggagaaga tcagccacca agaccacagt
660
gacaagaatc ggctgctgga actggagaca agattgcggg aggtcagtct agagcacgag
720
gagcagaaac tggagctcaa gcgccagctc acagagctac agctctccct gcaggagcgc
780
gagtcacagt tgacagccct gcaggctgca cgggcggccc tggagagcca gcttcgccag
840
gcgaagacag agctggaaga gaccacagca gaagctgaag aggagatcca ggcactcacg
900
gcacatagag atgaaatcca gcgcaaattt gatgctcttc gtaacagctg tactgtaatc
960

5427

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acagacctgg aggagcagct aaaccagctg accgaggaca acgctgaact caacaaccaa
1020
aacttctact tgtccaaaca actcgatgag gcttctggcg ccaacgacga gattgtacaa
1080
ctgcgaagtg aagtggacca tctccgccgg gagatcacgg aacgagagat gcagcttacc
1140
agccagaagc aaacgatgga ggctctgaag accacgtgca ccatgctgga ggaacaggtc
1200
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1320
atgctggaca ccgagaaaca gagcagggcg agagccgatc agcggatcac cgagtctcgc
1380
caggtggtgg agctggcagt gaaggagcac aaggctgaga ttctcgctct gcagcaggct
1440
ctcaaagagc agaagctgaa ggccgagagc ctctctgaca agctcaatga cctggagaag
1500
aagcatgcta tgcttgaaat gaatgcccga agcttacagc agaagctgga gactgaacga
1560
gagctcaaac agaggcttct ggaagagcaa gccaaattac agcagcagat ggacctgcag
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2580
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4200
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5820
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6600
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6609


<210> 6246
<211> 1286
<212> PRT
<213> Homo sapiens

<400> 6246
Val Leu Asp Asn Gln Ile Lys Lys Asp Leu Ala Asp Lys Glu Thr Leu
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Glu Asn Met Met Gln Arg His Glu Glu Glu Ala His Glu Lys Gly Lys
            20                  25                  30
Ile Leu Ser Glu Gln Lys Ala Met Ile Asn Ala Met Asp Ser Lys Ile
        35                  40                  45
Arg Ser Leu Glu Gln Arg Ile Val Glu Leu Ser Glu Ala Asn Lys Leu
    50                  55                  60
Ala Ala Asn Ser Ser Leu Phe Thr Gln Arg Asn Met Lys Ala Gln Glu
65                  70                  75                  80
Glu Met Ile Ser Glu Leu Arg Gln Gln Lys Phe Tyr Leu Glu Thr Gln
                85                  90                  95
Ala Gly Lys Leu Glu Ala Gln Asn Arg Lys Leu Glu Glu Gln Leu Glu
            100                 105                 110
Lys Ile Ser His Gln Asp His Ser Asp Lys Asn Arg Leu Leu Glu Leu
        115                 120                 125
Glu Thr Arg Leu Arg Glu Val Ser Leu Glu His Glu Glu Gln Lys Leu
    130                 135                 140
Glu Leu Lys Arg Gln Leu Thr Glu Leu Gln Leu Ser Leu Gln Glu Arg
```

```
        145                     150                     155                     160
Glu Ser Gln Leu Thr Ala Leu Gln Ala Ala Arg Ala Ala Leu Glu Ser
                    165                     170                     175
Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Glu Thr Thr Ala Glu Ala
                    180                     185                     190
Glu Glu Glu Ile Gln Ala Leu Thr Ala His Arg Asp Glu Ile Gln Arg
                195                     200                     205
Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu
        210                     215                     220
Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln
225                     230                     235                     240
Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp
                    245                     250                     255
Glu Ile Val Gln Leu Arg Ser Glu Val Asp His Leu Arg Arg Glu Ile
                260                     265                     270
Thr Glu Arg Glu Met Gln Leu Thr Ser Gln Lys Gln Thr Met Glu Ala
        275                     280                     285
Leu Lys Thr Thr Cys Thr Met Leu Glu Glu Gln Val Met Asp Leu Glu
    290                     295                     300
Ala Leu Asn Asp Glu Leu Leu Glu Lys Glu Arg Gln Trp Glu Ala Trp
305                     310                     315                     320
Arg Ser Val Leu Gly Asp Glu Lys Ser Gln Phe Glu Cys Arg Val Arg
                    325                     330                     335
Glu Leu Gln Arg Met Leu Asp Thr Glu Lys Gln Ser Arg Ala Arg Ala
                340                     345                     350
Asp Gln Arg Ile Thr Glu Ser Arg Gln Val Val Glu Leu Ala Val Lys
                355                     360                     365
Glu His Lys Ala Glu Ile Leu Ala Leu Gln Gln Ala Leu Lys Glu Gln
        370                     375                     380
Lys Leu Lys Ala Glu Ser Leu Ser Asp Lys Leu Asn Asp Leu Glu Lys
385                     390                     395                     400
Lys His Ala Met Leu Glu Met Asn Ala Arg Ser Leu Gln Gln Lys Leu
                    405                     410                     415
Glu Thr Glu Arg Glu Leu Lys Gln Arg Leu Leu Glu Glu Gln Ala Lys
                420                     425                     430
Leu Gln Gln Gln Met Asp Leu Gln Lys Asn His Ile Phe Arg Leu Thr
                435                     440                     445
Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu
        450                     455                     460
Arg Ser Asp Leu Glu Tyr Gln Leu Glu Asn Ile Gln Val Leu Tyr Ser
465                     470                     475                     480
His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu
                    485                     490                     495
Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys Lys
                500                     505                     510
Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys
        515                     520                     525
Ala Arg Cys Ala Glu Leu Glu Glu Ala Leu Gln Lys Thr Arg Ile Glu
        530                     535                     540
Leu Arg Ser Ala Arg Glu Glu Ala Ala His Arg Lys Ala Thr Asp His
545                     550                     555                     560
Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser
                    565                     570                     575
Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu
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5432

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              580                        585                        590
Ala Pro Pro Ser Ser Arg Arg Lys Glu Ser Ser Thr Pro Glu Glu Phe
         595                        600                        605
Ser Arg Arg Leu Lys Glu Arg Met His His Asn Ile Pro His Arg Phe
         610                        615                        620
Asn Val Gly Leu Asn Met Arg Ala Thr Lys Cys Ala Val Cys Leu Asp
625                        630                        635                        640
Thr Val His Phe Gly Arg Gln Ala Ser Lys Cys Leu Glu Cys Gln Val
                   645                        650                        655
Met Cys His Pro Lys Cys Ser Thr Cys Leu Pro Ala Thr Cys Gly Leu
              660                        665                        670
Pro Ala Glu Tyr Ala Thr His Phe Thr Glu Ala Phe Cys Arg Asp Lys
         675                        680                        685
Met Asn Ser Pro Gly Leu Gln Thr Lys Glu Pro Ser Ser Ser Leu His
         690                        695                        700
Leu Glu Gly Trp Met Lys Val Pro Arg Asn Asn Lys Arg Gly Gln Gln
705                        710                        715                        720
Gly Trp Asp Arg Lys Tyr Ile Val Leu Glu Gly Ser Lys Val Leu Ile
                   725                        730                        735
Tyr Asp Asn Glu Ala Arg Glu Ala Gly Gln Arg Pro Val Glu Glu Phe
              740                        745                        750
Glu Leu Cys Leu Pro Asp Gly Asp Val Ser Ile His Gly Ala Val Gly
              755                        760                        765
Ala Ser Glu Leu Ala Asn Thr Ala Lys Ala Asp Val Pro Tyr Ile Leu
         770                        775                        780
Lys Met Glu Ser His Pro His Thr Thr Cys Trp Pro Gly Arg Thr Leu
785                        790                        795                        800
Tyr Leu Leu Ala Pro Ser Phe Pro Asp Lys Gln Arg Trp Val Thr Ala
                   805                        810                        815
Leu Glu Ser Val Val Ala Gly Gly Arg Val Ser Arg Glu Lys Ala Glu
              820                        825                        830
Ala Asp Ala Lys Leu Leu Gly Asn Ser Leu Leu Lys Leu Glu Gly Asp
         835                        840                        845
Asp Arg Leu Asp Met Asn Cys Thr Leu Pro Phe Ser Asp Gln Val Val
         850                        855                        860
Leu Val Gly Thr Glu Glu Gly Leu Tyr Ala Leu Asn Val Leu Lys Asn
865                        870                        875                        880
Ser Leu Thr His Val Pro Gly Ile Gly Ala Val Phe Gln Ile Tyr Ile
                   885                        890                        895
Ile Lys Asp Leu Glu Lys Leu Leu Met Ile Ala Gly Glu Glu Arg Ala
              900                        905                        910
Leu Cys Leu Val Asp Val Lys Lys Val Lys Gln Ser Leu Ala Gln Ser
         915                        920                        925
His Leu Pro Ala Gln Pro Asp Ile Ser Pro Asn Ile Phe Glu Ala Val
         930                        935                        940
Lys Gly Cys His Leu Phe Gly Ala Gly Lys Ile Glu Asn Gly Leu Cys
945                        950                        955                        960
Ile Cys Ala Ala Met Pro Ser Lys Val Val Ile Leu Arg Tyr Asn Glu
                   965                        970                        975
Asn Leu Ser Lys Tyr Cys Ile Arg Lys Glu Ile Glu Thr Ser Glu Pro
              980                        985                        990
Cys Ser Cys Ile His Phe Thr Asn Tyr Ser Ile Leu Ile Gly Thr Asn
         995                        1000                       1005
Lys Phe Tyr Glu Ile Asp Met Lys Gln Tyr Thr Leu Glu Glu Phe Leu
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       1010                    1015                    1020
Asp Lys Asn Asp His Ser Leu Ala Pro Ala Val Phe Ala Ala Ser Ser
1025                    1030                    1035                    1040
Asn Ser Phe Pro Val Ser Ile Val Gln Val Asn Ser Ala Gly Gln Arg
                    1045                    1050                    1055
Glu Glu Tyr Leu Leu Cys Phe His Glu Phe Gly Val Phe Val Asp Ser
                    1060                    1065                    1070
Tyr Gly Arg Arg Ser Arg Thr Asp Asp Leu Lys Trp Ser Arg Leu Pro
            1075                    1080                    1085
Leu Ala Phe Ala Tyr Arg Glu Pro Tyr Leu Phe Val Thr His Phe Asn
        1090                    1095                    1100
Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
1105                    1110                    1115                    1120
Ala Arg Ala Tyr Leu Asp Ile Pro Asn Pro Arg Tyr Leu Gly Pro Ala
                    1125                    1130                    1135
Ile Ser Ser Gly Ala Ile Tyr Leu Ala Ser Ser Tyr Gln Asp Lys Leu
            1140                    1145                    1150
Arg Val Ile Cys Cys Lys Gly Asn Leu Val Lys Glu Ser Gly Thr Glu
        1155                    1160                    1165
His His Arg Gly Pro Ser Thr Ser Arg Ser Ser Pro Asn Lys Arg Gly
    1170                    1175                    1180
Pro Pro Thr Tyr Asn Glu His Ile Thr Lys Arg Val Ala Ser Ser Pro
1185                    1190                    1195                    1200
Ala Pro Pro Glu Gly Pro Ser His Pro Arg Glu Pro Ser Thr Pro His
                    1205                    1210                    1215
Arg Tyr Arg Glu Gly Arg Thr Glu Leu Arg Arg Asp Lys Ser Pro Gly
            1220                    1225                    1230
Arg Pro Leu Glu Arg Glu Lys Ser Pro Gly Arg Met Leu Ser Thr Arg
        1235                    1240                    1245
Arg Glu Arg Ser Pro Gly Arg Leu Phe Glu Asp Ser Ser Arg Gly Arg
    1250                    1255                    1260
Leu Pro Ala Gly Ala Val Arg Thr Pro Leu Ser Gln Val Asn Lys Val
1265                    1270                    1275                    1280
Trp Asp Gln Ser Ser Val
                1285
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<210> 6247
<211> 497
<212> DNA
<213> Homo sapiens

<400> 6247
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tagaagtgct ggagagggcc aagaggaggg cggtggactg gcatgccctg gagcgtccca
120
aaggctgcat gggggtcctt gcccgggagg cgccccacct agagaaacag ccggcagccg
180
gcccgcagcg cgttctcccg ggagagaaat attattcatc tgtgccagag gaaggagggg
240
caacccatgt ctatcgttat cacagaggcg agtcgaagct gcacatgtgc ttggacatag
300
ggaatggtca gagaaaagac agaaaaaaga catcccttgg tcctggaggc agctatcaaa
360

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tatcagagca tgctccagag gcatcccagc ctgtgagtac ggaactgctt acgcactggg
420
tttcaccacc gttgcaactc catgaaccag ttgacatggt tcttagaggg ctatttgaat
480
tgagtctata gtatttt
497
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<210> 6248
<211> 142
<212> PRT
<213> Homo sapiens
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<400> 6248
Met Gly Trp Thr Asp Val Pro Cys Ser Val His Lys Ala Gly Ser Arg
 1               5                  10                  15
Ser Ala Gly Glu Gly Gln Glu Glu Gly Gly Gly Leu Ala Cys Pro Gly
                20                  25                  30
Ala Ser Gln Arg Leu His Gly Gly Pro Cys Pro Gly Gly Ala Pro Pro
            35                  40                  45
Arg Glu Thr Ala Gly Ser Arg Pro Ala Ala Arg Ser Pro Gly Arg Glu
        50                  55                  60
Ile Leu Phe Ile Cys Ala Arg Gly Arg Arg Gly Asn Pro Cys Leu Ser
65                  70                  75                  80
Leu Ser Gln Arg Arg Val Glu Ala Ala His Val Leu Gly His Arg Glu
                85                  90                  95
Trp Ser Glu Lys Arg Gln Lys Lys Asp Ile Pro Trp Ser Trp Arg Gln
            100                 105                 110
Leu Ser Asn Ile Arg Ala Cys Ser Arg Gly Ile Pro Ala Cys Glu Tyr
        115                 120                 125
Gly Thr Ala Tyr Ala Leu Gly Phe Thr Thr Val Ala Thr Pro
    130                 135                 140
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<210> 6249
<211> 1217
<212> DNA
<213> Homo sapiens
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<400> 6249
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aagtctcaac ttccaacctc tttgcagcta ggagtggcca agtagcatag atctggtgaa
120
tgaactgcag gtgggaattt ctgagaaggt ttccttctta aatagaaaga ttaaaccaca
180
ggttccatta tgggtcgact tgatgggaaa gtcatcatcc tgacggccgc tgctcagggg
240
attggccaag cagctgcctt agcttttgca agagaaggtg ccaaagtcat agccacagac
300
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360
gatgtcacaa agaagaaaca aattgatcag tttgccaatg aagttgagag acttgatgtt
420
ctctttaatg ttgctggttt tgtccatcat ggaactgtcc tggattgtga ggagaaagac
480
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tgggacttct cgatgaatct caatgtgcgc agcatgtacc tgatgatcaa ggcattcctt
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1020
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1080
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1140
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1200
aaaaaaaaaa aaaaaaa
1217


<210> 6250
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6250
Met Gly Arg Leu Asp Gly Lys Val Ile Ile Leu Thr Ala Ala Ala Gln
 1               5                   10                  15
Gly Ile Gly Gln Ala Ala Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys
                20                  25                  30
Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
            35                  40                  45
Tyr Pro Gly Ile Gln Thr Arg Val Leu Asp Val Thr Lys Lys Lys Gln
        50                  55                  60
Ile Asp Gln Phe Ala Asn Glu Val Glu Arg Leu Asp Val Leu Phe Asn
65                  70                  75                  80
Val Ala Gly Phe Val His His Gly Thr Val Leu Asp Cys Glu Glu Lys
                85                  90                  95
Asp Trp Asp Phe Ser Met Asn Leu Asn Val Arg Ser Met Tyr Leu Met
                100                 105                 110
Ile Lys Ala Phe Leu Pro Lys Met Leu Ala Gln Lys Ser Gly Asn Ile
            115                 120                 125
Ile Asn Met Ser Ser Val Ala Ser Ser Val Lys Gly Val Val Asn Arg
        130                 135                 140
Cys Val Tyr Ser Thr Thr Lys Ala Ala Val Ile Gly Leu Thr Lys Ser
145                 150                 155                 160
Val Ala Ala Asp Phe Ile Gln Gln Gly Ile Arg Cys Asn Cys Val Cys
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5436

```
                      165                    170                    175
Pro Gly Thr Val Asp Thr Pro Ser Leu Gln Glu Arg Ile Gln Ala Arg
                 180                    185                    190
Gly Asn Pro Glu Glu Ala Arg Asn Asp Phe Leu Lys Arg Gln Lys Thr
            195                    200                    205
Gly Arg Phe Ala Thr Ala Glu Glu Ile Ala Met Leu Cys Val Tyr Leu
       210                    215                    220
Ala Ser Asp Glu Ser Ala Tyr Val Thr Gly Asn Pro Val Ile Ile Asp
225                  230                    235                    240
Gly Gly Trp Ser Leu
                245
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<210> 6251
<211> 1611
<212> DNA
<213> Homo sapiens


<400> 6251
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120
ttttgtgact ttttccgttt ctttacaata ggacttctct cagtgtgtga cacccagtga
180
gggctgaccc atcctcctct cctttgcttc accaggaatg tcatcagaca catggcttga
240
ccttggaagg gcccagtctg tctgacaggg ctttgcagac ccggcggcta ttgctttgaa
300
aaggaggaga aagaccacgc acgggcagca gcctggaggg acccggtggg ctgctgagag
360
ggggctccgc tgcgacgggc cctggcccag cttcaggccc tcacaggagg acagtcaagg
420
gctgggagcc ctaggccgga ctgcatttcc gctcccgcag gagactttct atgaaataaa
480
tatagaaaag agggcatccc ccagccccac agcacaagac cctggccctc agcgctggac
540
agctgagaca gacgcaggct cgctgctcag ggggagtaag tgctgggctc cagtaggctc
600
ccacaggccc actgaggcag aggcatgagt cgcccaagtg ctggatgggg catggggaga
660
aaggggcgtg ggcagccctg ctactgctgg caagaggtgg ccccattttt tccagatggg
720
gaaactgagg cacaaggagg tttgggaact tgcccaaggt cactcacagt gagtcagctt
780
tttaggggga ggagagcggc tcacactctg ggaaacacag tcacctcccc actggggagc
840
agggccaggc aggaggggcc tcagggccca tgactgcctg gaggggacac tcagcctctc
900
tgaggacata tggggggtag gcctctgggg aagggtcttt gcttggcatc aggcagggcc
960
aagtccagta agggcaaggg gaggggggcat tctggtgaga acagcatttc tggcaagacg
1020
ggcatccact tcaaaatctc ggctcaaaag ggcagcaggg ctgttctcaa gccaggcagg
1080
```

```
cagggtcccc caatccctac aattctcctg agtccctcac caccatggag gacccttgct
1140
agggtctacc gggagagtca ccacatctat tatgaggcaa gggcactggg atatgttccc
1200
accatcccct aaacacaaga gtaggctagg ggagcgtgca ggcagccccc gctcacggcc
1260
aggcctgcag cccaacccat gggccccttc gcactgggag tccacgtgag ctcagtacca
1320
cggggaagga tagagaaggg aacaggttaa cgcgcgtgta cagcacctca gagaagccac
1380
tgagacggga gagaaagagc caggtctaga aaggcctccc atcaccggca gcagagaggg
1440
actggtgggc tgaaagggga cagggactgg caggaggggc ttccctgcct gggggtgagg
1500
agggagctca cgtgtgggct gtggattcct tgctgtccag ccaggctggg ggcagggagt
1560
ggccatggac tgagccacct agagatggga gagaagttgg tatgggtaan a
1611
```

```
<210> 6252
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6252
Met Gly Gly Arg Pro Leu Gly Lys Gly Leu Cys Leu Ala Ser Gly Arg
1               5                   10                  15
Ala Lys Ser Ser Lys Gly Lys Gly Arg Gly His Ser Gly Glu Asn Ser
            20                  25                  30
Ile Ser Gly Lys Thr Gly Ile His Phe Lys Ile Ser Ala Gln Lys Gly
        35                  40                  45
Ser Arg Ala Val Leu Lys Pro Gly Arg Gln Gly Pro Pro Ile Pro Thr
    50                  55                  60
Ile Leu Leu Ser Pro Ser Pro Pro Trp Arg Thr Leu Ala Arg Val Tyr
65                  70                  75                  80
Arg Glu Ser His His Ile Tyr Tyr Glu Ala Arg Ala Leu Gly Tyr Val
            85                  90                  95
Pro Thr Ile Pro
            100
```

```
<210> 6253
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 6253
nngtggggta gcgggcaagg cgggcgccga gtttgcaaag gctcgcagcg gccagaaacc
60
cggctccgag cggcggcggc ccggcttccg ctgcccgtga gctaaggacg gtccgctccc
120
tctagccagc tccgaatcct gatccaggcg ggggccaggg gccctcgcc tcccctctga
180
ggaccgaaga tgagcttcct cttcagcagc cgctcttcta aaacattcaa accaaagaag
240
```

```
aatatccctg aaggatctca tcagtatgaa ctcttaaaac atgcagaagc aactctagga
300
agtgggaatc tgagacaagc tgttatgttg cctgagggag aggatctcaa tgaatggatt
360
gctgtgaaca ctgtggattt ctttaaccag atcaacatgt tatatggaac tattacagaa
420
ttctgcactg aagcaagctg tccagtcatg tctgcaggtc cgagatatga atatcactgg
480
gcagatggta ctaatattaa aaagccaatc aaatgttctg caccaaaata cattgactat
540
ttgatgactt gggttcaaga tcagcttgat gatgaaactc tttttccttc taagattggt
600
gtcccatttc ccaaaaactt tatgtctgtg gcaaagacta ttctaaagcg tctgttcagg
660
gtttatgccc atatttatca ccagcacttt gattctgtga tgcagctgca agaggaggcc
720
cacctcaaca cctcctttaa gcactttatt ttctttgttc aggagtttaa tctgattgat
780
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840
atgtttcttc tagaacacag ttaccccctt gcttcatcta ttgctagaac tatctcattg
900
ctatctgtta tagactagtg atacaaactt aagaaaaca ggataaaaag atacccattg
960
cctgtgtcta ctgataaaat tatcccaaag gtaggttggt gtgatagttt ccgagtaaga
1020
ccttaaggac acagccaaat cttaagtact gtgtgaccac tcttgttgtt atcacatagt
1080
catacttggt tgtaatatgt gatggttaac ctgtagctta taaatttact tattattctt
1140
ttactcattt actcagtcat ttctttacaa gaaaatgatt gaatctgttt taggtgacag
1200
cacaatggac attaagaatt tccatcaata atttatgaat aagtttccag aacaaatttc
1260
ctaataacac aatcagattg gttttattct tttattttac gaataaaaaa tgtatttttc
1320
agtaccttg agatttagaa catctgtgtc acttcagata acattttagt ttcaagtttg
1380
tatggtagtg tttttataga taagatacgt ctattttttc aaaattcatg attgcagttt
1440
aaatcatcat atgacgtgtg ggtgggagca accaaagtta tttttacagg gactttattt
1500
tttgatcttt atttgagatt gttttcatat ctatctaaat tattaggagt gtgtgtatca
1560
gaagtaattt tttaatgtct tctaaggatg gtcttccagg cttttaaact gaaaagctta
1620
attcagatag tagcttttgg ctgagaaaag gaatccaaaa tattaataaa tttagatctc
1680
aaaaccacta tttttattat ttcattattt ttcagaggcc ttaaaattct gggtaagaga
1740
atggaggaaa atactcagag tacttgatta ttttatttcc ttttattaaa aaattacttc
1800
tatgtttta ttgtctcttg agccttagtt aagagtagtg tagaaatgca tgaacttcat
1860
```

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cctaataagg ataaaactta aggaaaacca caataaacca tgaaggtgta cacatcttaa
1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
1953
```

```
<210> 6254
<211> 216
<212> PRT
<213> Homo sapiens
```

```
<400> 6254
Met Ser Phe Leu Phe Ser Ser Arg Ser Ser Lys Thr Phe Lys Pro Lys
1               5                   10                  15
Lys Asn Ile Pro Glu Gly Ser His Gln Tyr Glu Leu Leu Lys His Ala
            20                  25                  30
Glu Ala Thr Leu Gly Ser Gly Asn Leu Arg Gln Ala Val Met Leu Pro
            35                  40                  45
Glu Gly Glu Asp Leu Asn Glu Trp Ile Ala Val Asn Thr Val Asp Phe
        50                  55                  60
Phe Asn Gln Ile Asn Met Leu Tyr Gly Thr Ile Thr Glu Phe Cys Thr
65                  70                  75                  80
Glu Ala Ser Cys Pro Val Met Ser Ala Gly Pro Arg Tyr Glu Tyr His
                85                  90                  95
Trp Ala Asp Gly Thr Asn Ile Lys Lys Pro Ile Lys Cys Ser Ala Pro
                100                 105                 110
Lys Tyr Ile Asp Tyr Leu Met Thr Trp Val Gln Asp Gln Leu Asp Asp
            115                 120                 125
Glu Thr Leu Phe Pro Ser Lys Ile Gly Val Pro Phe Pro Lys Asn Phe
            130                 135                 140
Met Ser Val Ala Lys Thr Ile Leu Lys Arg Leu Phe Arg Val Tyr Ala
145                 150                 155                 160
His Ile Tyr His Gln His Phe Asp Ser Val Met Gln Leu Gln Glu Glu
                165                 170                 175
Ala His Leu Asn Thr Ser Phe Lys His Phe Ile Phe Phe Val Gln Glu
                180                 185                 190
Phe Asn Leu Ile Asp Arg Arg Glu Leu Ala Pro Leu Gln Glu Leu Ile
            195                 200                 205
Glu Lys Leu Gly Ser Lys Asp Arg
    210                 215
```

```
<210> 6255
<211> 622
<212> DNA
<213> Homo sapiens
```

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<400> 6255
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gagatcatgc cattgcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa
120
aaagccacag tggctgcctt cacagccagc gagggccacg cacatcccag ggtagtggag
180
ctacccaaga cggatgaggg cctaggcttc aacatcatgg gtggcaaaga gcaaaactcg
240
```

cccatctaca tctcccgggt catcccaggg ggtgtggctg accgccatgg aggcctcaag
300
cgtggggatc aactgttgtc ggtgaacggt gtgagcgttg agggtgagca gcatgagaag
360
gcggtggagc tgctgaaggc ggcccagggc tcggtgaagc tggttgtccg ttacacaccg
420
cgagtgctgg aggagatgga ggcccggttc gagaagatgc gctctgcccg ccggcgccaa
480
cagcatcaga gctactcgtc cttggagtct cgaggttgaa accacagatc tggacgttca
540
cgtgcactct cttcctgtac agtatttatt gttcctggca ctttatttaa agatttttga
600
ccctcaaaaa aaaaaaaaaa aa
622

<210> 6256
<211> 150
<212> PRT
<213> Homo sapiens

<400> 6256
Met Pro Leu His Ser Ser Leu Gly Asn Arg Val Arg Leu His Leu Lys
1   5   10   15
Lys Lys Lys Ala Thr Val Ala Ala Phe Thr Ala Ser Glu Gly His Ala
            20   25   30
His Pro Arg Val Val Glu Leu Pro Lys Thr Asp Glu Gly Leu Gly Phe
            35   40   45
Asn Ile Met Gly Gly Lys Glu Gln Asn Ser Pro Ile Tyr Ile Ser Arg
        50   55   60
Val Ile Pro Gly Gly Val Ala Asp Arg His Gly Gly Leu Lys Arg Gly
65   70   75   80
Asp Gln Leu Leu Ser Val Asn Gly Val Ser Val Glu Gly Glu Gln His
                85   90   95
Glu Lys Ala Val Glu Leu Leu Lys Ala Ala Gln Gly Ser Val Lys Leu
            100   105   110
Val Val Arg Tyr Thr Pro Arg Val Leu Glu Glu Met Glu Ala Arg Phe
            115   120   125
Glu Lys Met Arg Ser Ala Arg Arg Arg Gln Gln His Gln Ser Tyr Ser
        130   135   140
Ser Leu Glu Ser Arg Gly
145   150

<210> 6257
<211> 2216
<212> DNA
<213> Homo sapiens

<400> 6257
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gggatgcctc ccttcccatg ctcccacccc tccatccca gaactccgtt gggctcagtg
120
tcctctgttg agggaaggtc ttggtgccca gatgcctact ctgcaggaga gggaggaacc
180

ttgtcccttt gcgggagtcg ctggtctctt ctgttgtggg gaagaaggaa ggtgggaggg
240
gcactgtcca ccagcactca gagctccatt atgtccccag ctggggttgc agggtagggg
300
ggactggggg tgtcccccag cctcagcaga cggagggcct cagggatgag gctgccagga
360
tagcgccaga gaagcagctc agagcaaggg ctcctgagtg ggggcagggc tggggagaag
420
gtcatggggg ggctgcagta ggggtggtca ttgtgcaggc tgagttgaga gaagtgggtg
480
gccatgttct cctcagacag aaactgcttg cgcagaggct cctgctcctc ctccaggcgc
540
cgcttggtgc tcatgggcac agctcctcgg agaggggagc tggcgtccag gccccaagtc
600
acccccaagg cggcccgcgg gaggcgctgg gcccctccct gggggcctcg ctgcaagggc
660
tgctgcagga tcattgggtt ttggggtcct gcgggtggga tctgggcgac aggggaggag
720
tctctgaggg cgtggccaag agaggatggg cgtggcttta ggcgggcaca gccgcgaggt
780
tctgcgcggg cgcggaagac gggcggcgcg tggcggaagg caggcttgct cctcggggcg
840
ggggagggta tccggcttaa gggggctgcg gtggacacca cttcttaatg tcgggggtct
900
tcgcggcgct cacctcggct cctagggttc gggacggtac gcaccagcca ccttcgcgcc
960
gaaggcggta gggcgccacg gagaggaacc gctctaggca cgtaaggcct cgtgaggttg
1020
cgtcgcgcgc ggagcactct gggacttgta gttctggaga tggagcgagc tgtgccgctc
1080
gcggtgcctc tgggtcagac agaggtgttc caggccttgc agcggctcca tatgaccatc
1140
ttctcccaga gcgtctcacc atgtgggaag tttctggcgg ctggcaacaa ttacgggcag
1200
attgccatct tcagcttgtc ctctgctttg agctcagaag ccaaagagga aagtaagaag
1260
ccggtggtga ctttccaagc ccatgatggg cccgtctata gcatggtttc caccgatcga
1320
catctgctta gtgctgggga tggggaggtg aaggcctggc tttgggcgga gatgctcaag
1380
aagggctgta aggagctgtg gcgtcgtcag cctccataca ggaccagcct ggaagtgcct
1440
gagatcaacg ctttgctgct ggtccccaag gagaattccc tcatcctggc tggggggagac
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1560
acagactaca tccactgcct ggcactgcgg gaaaggagcc cagaggtgct gtcaggtggc
1620
gaggatggag ctgttcgact ttgggacctg cgcacagcca aggaggtcca gacgatcgag
1680
tctataagca cgaggagtgc tcgaggcccc acaatgggcg ctggattgga tgtttggact
1740
gattccgact ggatggtctg tggaggggggc ccagccctca ccctctggca cctccgatcc
1800

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tccacaccca ccaccatctt ccccatccgg gcgccacaga agcacgtcac cttctaccag
1860
gacctgattc tgtcagctgg ccagggccgc tgcgtcaacc agtggcagct gagcggggag
1920
ctgaaggccc aggtgcctgg ctcctcccca gggctgctca gcctcagcct caaccagcag
1980
cctgccgcgc ctgagtgcaa ggtcctgaca gctgcaggca acagctgccg ggtggatgtc
2040
ttcaccaacc tgggttaccg agccttctcc ctgtccttct gatctctgac gacacccccca
2100
gccagctcag ggttttagag tgttttttcat tttcttttttt tttttttttt tacaataaag
2160
tttcaggctt tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2216
```

<210> 6258
<211> 340
<212> PRT
<213> Homo sapiens

<400> 6258

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Met Glu Arg Ala Val Pro Leu Ala Val Pro Leu Gly Gln Thr Glu Val
 1               5                  10                  15
Phe Gln Ala Leu Gln Arg Leu His Met Thr Ile Phe Ser Gln Ser Val
           20                  25                  30
Ser Pro Cys Gly Lys Phe Leu Ala Ala Gly Asn Asn Tyr Gly Gln Ile
           35                  40                  45
Ala Ile Phe Ser Leu Ser Ser Ala Leu Ser Ser Glu Ala Lys Glu Glu
       50                  55                  60
Ser Lys Lys Pro Val Val Thr Phe Gln Ala His Asp Gly Pro Val Tyr
65                  70                  75                  80
Ser Met Val Ser Thr Asp Arg His Leu Leu Ser Ala Gly Asp Gly Glu
                85                  90                  95
Val Lys Ala Trp Leu Trp Ala Glu Met Leu Lys Lys Gly Cys Lys Glu
               100                 105                 110
Leu Trp Arg Arg Gln Pro Pro Tyr Arg Thr Ser Leu Glu Val Pro Glu
           115                 120                 125
Ile Asn Ala Leu Leu Leu Val Pro Lys Glu Asn Ser Leu Ile Leu Ala
       130                 135                 140
Gly Gly Asp Cys Gln Leu His Thr Met Asp Leu Glu Thr Gly Thr Phe
145                 150                 155                 160
Thr Arg Val Leu Arg Gly His Thr Asp Tyr Ile His Cys Leu Ala Leu
               165                 170                 175
Arg Glu Arg Ser Pro Glu Val Leu Ser Gly Gly Glu Asp Gly Ala Val
           180                 185                 190
Arg Leu Trp Asp Leu Arg Thr Ala Lys Glu Val Gln Thr Ile Glu Ser
           195                 200                 205
Ile Ser Thr Arg Ser Ala Arg Gly Pro Thr Met Gly Ala Gly Leu Asp
       210                 215                 220
Val Trp Thr Asp Ser Asp Trp Met Val Cys Gly Gly Gly Pro Ala Leu
225                 230                 235                 240
Thr Leu Trp His Leu Arg Ser Ser Thr Pro Thr Thr Ile Phe Pro Ile
               245                 250                 255
Arg Ala Pro Gln Lys His Val Thr Phe Tyr Gln Asp Leu Ile Leu Ser
```

```
                 260                    265                    270
Ala Gly Gln Gly Arg Cys Val Asn Gln Trp Gln Leu Ser Gly Glu Leu
           275                    280                    285
Lys Ala Gln Val Pro Gly Ser Ser Pro Gly Leu Leu Ser Leu Ser Leu
           290                    295                    300
Asn Gln Gln Pro Ala Ala Pro Glu Cys Lys Val Leu Thr Ala Ala Gly
305                    310                    315                    320
Asn Ser Cys Arg Val Asp Val Phe Thr Asn Leu Gly Tyr Arg Ala Phe
                 325                    330                    335
Ser Leu Ser Phe
           340
```

```
<210> 6259
<211> 384
<212> DNA
<213> Homo sapiens


<400> 6259
ccatgcagcg atcccataga acacagctca gagtctgata acagtgtcct tgaaattcca
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gatgctttcg atagaacaga gaacatgtta tctatgcaga aaaatgaaaa gataaagtat
120
tctaggtttg ctgccacaaa cactagggta aaagcaaaac agaagcctct cattagtaac
180
tcacatacag accacttaat gggttgtact aagagtgcag agcctggaac cgagacgtct
240
caggttaatt ccttctctga tctgaaggca tctactcttg ttcacaaacc ccagtcagat
300
tttacaaatg atgctctctc tccaaaattc aacctgtcat caagcatatc cagtgagaac
360
tcgttaataa agggtggggc agca
384


<210> 6260
<211> 128
<212> PRT
<213> Homo sapiens


<400> 6260
Pro Cys Ser Asp Pro Ile Glu His Ser Ser Glu Ser Asp Asn Ser Val
  1              5                    10                    15
Leu Glu Ile Pro Asp Ala Phe Asp Arg Thr Glu Asn Met Leu Ser Met
           20                    25                    30
Gln Lys Asn Glu Lys Ile Lys Tyr Ser Arg Phe Ala Ala Thr Asn Thr
           35                    40                    45
Arg Val Lys Ala Lys Gln Lys Pro Leu Ile Ser Asn Ser His Thr Asp
      50                    55                    60
His Leu Met Gly Cys Thr Lys Ser Ala Glu Pro Gly Thr Glu Thr Ser
65                    70                    75                    80
Gln Val Asn Ser Phe Ser Asp Leu Lys Ala Ser Thr Leu Val His Lys
                 85                    90                    95
Pro Gln Ser Asp Phe Thr Asn Asp Ala Leu Ser Pro Lys Phe Asn Leu
           100                   105                   110
Ser Ser Ser Ile Ser Ser Glu Asn Ser Leu Ile Lys Gly Gly Ala Ala
```

115   120   125

<210> 6261
<211> 3619
<212> DNA
<213> Homo sapiens

<400> 6261
ntccttgcag gctctgcgtc gggaaagccg ctcattctcg cttccccttc cctttcccgg
60
ctcaagtcct tcctctctct ttcctttctt tccgcctatc tttttttctgc tgccgctccg
120
ggtccgggcc attttccggg ccgggcgcac taaggtgcgc ggccccgggg cccagtatat
180
gacccgccgt cctgctatcc ttcgcttccc ccgccccatg tggctgcggg gccgcggcgg
240
cgctgcccac tatggcccgg aaagtagtta gcaggaagcg gaaagcgccc gcctcgccgg
300
gagctgggag cgacgctcat gggcccgcag tttggctggg atcactcgct tcacaaaagg
360
aaaagacttc ctcctgtgaa gagatcctta gtatactact tgaagaaccg ggaagtcagg
420
ctacagaatg aaaccagcta ctctcgagtg ttgcatggtt atgcagcaca gcaacttccc
480
agtctcctga aggagagaga gtttcacctt gggacccttа ataaagtgtt tgcatctcag
540
tggttgaatc ataggcaagt ggtgtgtggc acaaaatgca acacgctatt tgtcgtagat
600
gtccagacaа gccagatcac caagatcccc attctgaaag accgggagcc tggaggtgtg
660
acccagcagg gctgtggtat ccatgccatc gagctgaatc cttctagaac actgctagcc
720
actggaggag acaacccccaa cagtcttgcc atctatcgac tacctacgct ggatcctgtg
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1260
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1320
acaggcagg gctccctgct gttctatgac atccgagctc agagatttct ggaagagagg
1380

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ctctcagctt gttatgggtc caagcccaga ctagcagggg agaatctgaa actaaccact
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1620
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1980
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2040    —
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2100
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2160
gaaacaactt tattcacaga gtccagcttt gggactagtc tgtatcttgt tttttaagtc
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2280
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2340
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2460
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2520
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2580
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2760
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2820
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2880
taatttgtct gttcctccct tgaactgtct gtttagtctg aggtttttaa acttgcaggc
2940
agctgactgt gatgtccact tgttccctga ttttaacaca tcatgtcaaa gataacagct
3000
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gttcccaccc accagttcct ctaagcacat actctgcttt tctgtcaaca tcccattttg
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gggaaaggaa aagtcatatt tattcctgca ccccagtttt ttaacttgtt ctcccagttg
3120
tcccctcttt ctctgggtgt aagaagggaa attggaaaaa aaattatata tatattctcc
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3240
agcacatacc acaggttctg gaattctcat cttcgaacct agagaaatag gtgctataaa
3300
cagggaatta agcaaaatgc tggatgctat agatctttta attgtcttaa ttttttttct
3360
attattaaac tacaggctgt agatttctta gttctcacag aacttctatc attttaaact
3420
gacttgtata tttaaaaaaa aaatcttcag taggatgttt tgtactattg ctagaccctc
3480
ttctgtaatg ggtaatgcgt ttgattgttt gagattttct gtttttaaaa atgtagcact
3540
tgacttttg ccaaggaaaa aaataaaaat tattccagtg caaaaaaaaa aaaaaaaaaa
3600
aaaaaaaaaa aaaaaaaaa
3619


<210> 6262
<211> 431
<212> PRT
<213> Homo sapiens


<400> 6262
Met Gly Pro Gln Phe Gly Trp Asp His Ser Leu His Lys Arg Lys Arg
 1               5                   10                  15
Leu Pro Pro Val Lys Arg Ser Leu Val Tyr Tyr Leu Lys Asn Arg Glu
                20              25                  30
Val Arg Leu Gln Asn Glu Thr Ser Tyr Ser Arg Val Leu His Gly Tyr
            35                  40                  45
Ala Ala Gln Gln Leu Pro Ser Leu Leu Lys Glu Arg Glu Phe His Leu
        50                  55                  60
Gly Thr Leu Asn Lys Val Phe Ala Ser Gln Trp Leu Asn His Arg Gln
65                  70                  75                  80
Val Val Cys Gly Thr Lys Cys Asn Thr Leu Phe Val Val Asp Val Gln
                85                  90                  95
Thr Ser Gln Ile Thr Lys Ile Pro Ile Leu Lys Asp Arg Glu Pro Gly
                100                 105                 110
Gly Val Thr Gln Gln Gly Cys Gly Ile His Ala Ile Glu Leu Asn Pro
            115                 120                 125
Ser Arg Thr Leu Leu Ala Thr Gly Gly Asp Asn Pro Asn Ser Leu Ala
        130                 135                 140
Ile Tyr Arg Leu Pro Thr Leu Asp Pro Val Cys Val Gly Asp Asp Gly
145                 150                 155                 160
His Lys Asp Trp Ile Phe Ser Ile Ala Trp Ile Ser Asp Thr Met Ala
                165                 170                 175
Val Ser Gly Ser Arg Asp Gly Ser Met Gly Leu Trp Glu Val Thr Asp
            180                 185                 190
Asp Val Leu Thr Lys Ser Asp Ala Arg His Asn Val Ser Arg Val Pro
```

```
            195                 200                 205
Val Tyr Ala His Ile Thr His Lys Ala Leu Lys Asp Ile Pro Lys Glu
        210                 215                 220
Asp Thr Asn Pro Asp Asn Cys Lys Val Arg Ala Leu Ala Phe Asn Asn
225                 230                 235                 240
Lys Asn Lys Glu Leu Gly Ala Val Ser Leu Asp Gly Tyr Phe His Leu
                245                 250                 255
Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu Leu Ser Thr Lys Leu Pro
                260                 265                 270
Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr Gly Ser Glu Trp Ser Val
            275                 280                 285
Tyr Ala Val Gly Ser Gln Ala His Val Ser Phe Leu Asp Pro Arg Gln
        290                 295                 300
Pro Ser Tyr Asn Val Lys Ser Val Cys Ser Arg Glu Arg Gly Ser Gly
305                 310                 315                 320
Ile Arg Ser Val Ser Phe Tyr Glu His Ile Ile Thr Val Gly Thr Gly
                325                 330                 335
Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg Ala Gln Arg Phe Leu Glu
            340                 345                 350
Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys Pro Arg Leu Ala Gly Glu
            355                 360                 365
Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp Leu Asn His Asp Glu Thr
        370                 375                 380
Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe Phe Pro Asn Ala Val Tyr
385                 390                 395                 400
Thr His Cys Tyr Asp Ser Ser Gly Thr Lys Leu Phe Val Ala Gly Gly
                405                 410                 415
Pro Leu Pro Ser Gly Leu His Gly Asn Tyr Ala Gly Leu Trp Ser
            420                 425                 430
```

<210> 6263
<211> 2508
<212> DNA
<213> Homo sapiens

<400> 6263
nnggcacgag gcaacctgcc ctcatcctgg cccgcgactg taagaccgga cccacatcca
60
gaccaatctt cctgtccggg ctgctgcgac gcgggctccg caggttgcag gcgggcggcc
120
ggggcgcctg aaggttaccg agtgcatgag cgcctagcgc ttcccgcgct gccccgcccg
180
ctggcccgcc gacccgcccg ccggctcgcc cgccagcccc tcggcgcccg gcggcggcgg
240
cggcggtggc ggcgacggtc gcaggaggtg ccgtctgcct cccaggtgcg cgcttcgctc
300
ccggagccgc ggaactcggc ggccgccatg gcgtccaaca tggaccggga gatgatcctg
360
gcggattttc aggcatgtac tggcattgaa aacattgacg aagctattac attgcttgaa
420
caaaataatt gggacttagt ggcagctatc aatggtgtaa taccacagga aaatggcatt
480
ctacaaagtg aatatggagg tgagaccata ccaggacctg catttaatcc agcaagtcat
540

```
ccagcttcag ctcctacttc ctcttcttct tcagcgtttc gacctgtaat gccatccagg
600
cagattgtag aaaggcaacc tcggatgctg gacttcaggg ttgaatacag agacagaaat
660
gttgatgtgg tacttgaaga cacctgtact gttggagaga ttaaacagat tctagaaaat
720
gaacttcaga tacctgtgtc caaaatgctg ttaaaaggct ggaagacggg agatgtggaa
780
gacagtacgg tcctaaaatc tctacacttg ccaaaaaaca acagtcttta tgtccttaca
840
ccagatttgc caccaccttc atcatctagt catgctggtg ccctgcagga gtcattaaat
900
caaaacttca tgctgatcat cacccaccga gaagtccagc gggagtacaa cctgaacttc
960
tcaggaagca gtactattca agaggtaaag agaaatgtgt atgaccttac aagtatcccc
1020
gttcgccacc aattatggga gggctggcca acttctgcta cagacgactc aatgtgtctt
1080
gctgaatcag ggctctctta tccctgccat cgacttacag tgggaagaag atcttcacct
1140
gcacagaccc gggaacagtc ggaagaacaa atcaccgatg ttcatatggt tagtgatagc
1200
gatggagatg actttgaaga tgctacagaa tttgggggtgg atgatggaga agtatttggc
1260
atggcgtcat ctgccttgag aaaatctcca atgatttgtt ttttagtgcc agaaaacgca
1320
gaaaatgaag gagatgcctt attacaattt acagcagagt tttcttcaag atatggtgat
1380
tgccatcctg tattttttat tggctcatta gaagctgctt ttcaagaggc cttctatgtg
1440
aaagcccgag atagaaagct tcttgctatc tacctccacc atgatgaaag tgtgttaacc
1500
aacgtgttct gctcacaaat gctttgtgct gaatccattg tttcttatct gagtcaaaat
1560
tttataacct gggcttggga tctgacaaag gactccaaca gagcaagatt tctcactatg
1620
tgcaatagac actttggcag tgttgtggca caaaccattc ggactcaaaa aacggatcag
1680
tttccgcttt tcctgattat tatgggaaag cgatcatcta atgaagtgtt gaatgtgata
1740
caagggaaca caacagtaga tgagttaatg atgagactca tggctgcaat ggagatcttc
1800
acagcccaac aacaggaaga tataaaggac gaggatgaac gtgaagccag agaaaatgtg
1860
aagagagagc aagatgaggc ctatcgcctt tcacttgagg ctgacagagc aaagagggaa
1920
gctcacgaga gagagatggc agaacagttt cgtttggagc agattcgcaa agaacaagaa
1980
gaggaacgtg aggccatccg gctgtcctta gagcaagccc tgcctcctga gccaaaggaa
2040
gaaaatgctg agcctgtgag caaactgcgg atccggaccc ccagtggcga gttcttggag
2100
cggcgtttcc tggccagcaa caagctccag attgtctttg attttgtagc ttccaaagga
2160
```

5449

```
tttccatggg atgagtacaa gttactgagc accttttccta ggagagacgt aactcaactg
2220
gacccaaata aatcattatt ggaggtaaag ttgttccctc aagaaaccct tttccttgaa
2280
gcaaaagagt aaacacggcc cagcggtgga accagccatt ccttgacaag ccagcagcct
2340
gcgtcaggag aagggctcct cgccaaccca cccacacgct cgtctcactc aattcaatgt
2400
cacacttctg cctcttgcaa aattgctgga aaaagtaata ataaatatag ctacttaaga
2460
tttcccaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa
2508
```

```
<210> 6264
<211> 654
<212> PRT
<213> Homo sapiens
```

```
<400> 6264
Met Ala Ser Asn Met Asp Arg Glu Met Ile Leu Ala Asp Phe Gln Ala
1               5                   10                  15
Cys Thr Gly Ile Glu Asn Ile Asp Glu Ala Ile Thr Leu Leu Glu Gln
                20                  25                  30
Asn Asn Trp Asp Leu Val Ala Ala Ile Asn Gly Val Ile Pro Gln Glu
            35                  40                  45
Asn Gly Ile Leu Gln Ser Glu Tyr Gly Gly Glu Thr Ile Pro Gly Pro
        50                  55                  60
Ala Phe Asn Pro Ala Ser His Pro Ala Ser Ala Pro Thr Ser Ser Ser
65                  70                  75                  80
Ser Ser Ala Phe Arg Pro Val Met Pro Ser Arg Gln Ile Val Glu Arg
                85                  90                  95
Gln Pro Arg Met Leu Asp Phe Arg Val Glu Tyr Arg Asp Arg Asn Val
            100                 105                 110
Asp Val Val Leu Glu Asp Thr Cys Thr Val Gly Glu Ile Lys Gln Ile
        115                 120                 125
Leu Glu Asn Glu Leu Gln Ile Pro Val Ser Lys Met Leu Leu Lys Gly
        130                 135                 140
Trp Lys Thr Gly Asp Val Glu Asp Ser Thr Val Leu Lys Ser Leu His
145                 150                 155                 160
Leu Pro Lys Asn Asn Ser Leu Tyr Val Leu Thr Pro Asp Leu Pro Pro
                165                 170                 175
Pro Ser Ser Ser Ser His Ala Gly Ala Leu Gln Glu Ser Leu Asn Gln
            180                 185                 190
Asn Phe Met Leu Ile Ile Thr His Arg Glu Val Gln Arg Glu Tyr Asn
        195                 200                 205
Leu Asn Phe Ser Gly Ser Ser Thr Ile Gln Glu Val Lys Arg Asn Val
        210                 215                 220
Tyr Asp Leu Thr Ser Ile Pro Val Arg His Gln Leu Trp Glu Gly Trp
225                 230                 235                 240
Pro Thr Ser Ala Thr Asp Asp Ser Met Cys Leu Ala Glu Ser Gly Leu
                245                 250                 255
Ser Tyr Pro Cys His Arg Leu Thr Val Gly Arg Arg Ser Ser Pro Ala
            260                 265                 270
Gln Thr Arg Glu Gln Ser Glu Glu Gln Ile Thr Asp Val His Met Val
```

5450

```
            275                   280                   285
Ser Asp Ser Asp Gly Asp Asp Phe Glu Asp Ala Thr Glu Phe Gly Val
        290                   295                   300
Asp Asp Gly Glu Val Phe Gly Met Ala Ser Ser Ala Leu Arg Lys Ser
305                   310                   315                   320
Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp
                325                   330                   335
Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys
            340                   345                   350
His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala
            355                   360                   365
Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His
        370                   375                   380
His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys
385                   390                   395                   400
Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala
                405                   410                   415
Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys
            420                   425                   430
Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys
            435                   440                   445
Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser
        450                   455                   460
Asn Glu Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu
465                   470                   475                   480
Met Met Arg Leu Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln Gln
                485                   490                   495
Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys
            500                   505                   510
Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala
        515                   520                   525
Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu
    530                   535                   540
Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser
545                   550                   555                   560
Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro
                565                   570                   575
Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg
            580                   585                   590
Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala
        595                   600                   605
Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro
    610                   615                   620
Arg Arg Asp Val Thr Gln Leu Asp Pro Asn Lys Ser Leu Leu Glu Val
625                   630                   635                   640
Lys Leu Phe Pro Gln Glu Thr Leu Phe Leu Glu Ala Lys Glu
                645                   650
```

```
<210> 6265
<211> 1344
<212> DNA
<213> Homo sapiens

<400> 6265
```

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nnagcacttc cagcctctca ccgacccgga caacaaggtc ttaacccata tttaactttg
60
aacacctctg gtagtggaac aattcttata gatctgtctc ctgatgataa agagtttcag
120
tctgtggagg aagagatgca aagtacagtt cgagagcaca gagatggagg tcatgcaggt
180
ggaatcttca acagatacaa tattctcaag attcagaagg tttgtaacaa gaaactatgg
240
gaaagataca ctcaccggag aaaagaagtt tctgaagaaa accacaacca tgccaatgaa
300
cgaatgctat ttcatgggtc tccttttgtg aatgcaatta tccacaaagg ctttgatgaa
360
aggcatgcgt acataggtgg tatgtttgga gctggcattt attttgctga aaactcttcc
420
aaaagcaatc aatatgtata tggaattgga ggaggtactg ggtgtccagt tcacaaagac
480
agatcttgtt acatttgcca caggcagctg ctcttttgcc gggtaacctt gggaaagtct
540
ttcctgcagt tcagtgcaat gaaaatggca cattctcctc caggtcatca ctcagtcact
600
ggtaggccca gtgtaaatgg cctagcatta gctgaatatg ttatttacag aggagaacag
660
gcttatcctg agtatttaat tacttaccag attatgaggc ctgaaggtat ggtcgatgga
720
taaatagtta tttaagaaa ctaattccac tgaacctaaa atcatcaaag cagcagtggc
780
ctctacgttt tactcctttg ctgaaaaaaa atcatcttgc ccacaggcct gtggcaaaag
840
gataaaaatg tgaacgaagt ttaacattct gacttgataa agctttaata atgtacagtg
900
ttttctaaat atttcctgtt ttttcagcac tttaacagat gccattccag gttaaactgg
960
gttgtctgta ctaaattata aacagagtta acttgaacct tttatatgtt atgcattgat
1020
tctaacaaac tgtaatgccc tcaacagaac taattttact aatacaatac tgtgttcttt
1080
aaaacacagc atttacactg aatacaattt catttgtaaa actgtaaata agagcttttg
1140
tactagccca gtatttattt acattgcttt gtaatataaa tctgttttag aactgcagcg
1200
gtttacaaaa ttttttcata tgtattgttc atctatactt catcttacat cgtcatgatt
1260
gagtgatctt tacatttgat tccagaggct atgttcagtt gttagttggg aaagattgag
1320
ttatcagatt taatttgccg atgg
1344
```

```
<210> 6266
<211> 240
<212> PRT
<213> Homo sapiens

<400> 6266
Xaa Ala Leu Pro Ala Ser His Arg Pro Gly Gln Gln Gly Leu Asn Pro
```

```
      1                 5                  10                 15
    Tyr Leu Thr Leu Asn Thr Ser Gly Ser Gly Thr Ile Leu Ile Asp Leu
              20                25                30
    Ser Pro Asp Asp Lys Glu Phe Gln Ser Val Glu Glu Glu Met Gln Ser
              35                40                45
    Thr Val Arg Glu His Arg Asp Gly Gly His Ala Gly Gly Ile Phe Asn
              50                55                60
    Arg Tyr Asn Ile Leu Lys Ile Gln Lys Val Cys Asn Lys Lys Leu Trp
    65                70                75                80
    Glu Arg Tyr Thr His Arg Arg Lys Glu Val Ser Glu Glu Asn His Asn
              85                90                95
    His Ala Asn Glu Arg Met Leu Phe His Gly Ser Pro Phe Val Asn Ala
              100               105               110
    Ile Ile His Lys Gly Phe Asp Glu Arg His Ala Tyr Ile Gly Gly Met
              115               120               125
    Phe Gly Ala Gly Ile Tyr Phe Ala Glu Asn Ser Ser Lys Ser Asn Gln
              130               135               140
    Tyr Val Tyr Gly Ile Gly Gly Gly Thr Gly Cys Pro Val His Lys Asp
    145               150               155               160
    Arg Ser Cys Tyr Ile Cys His Arg Gln Leu Leu Phe Cys Arg Val Thr
              165               170               175
    Leu Gly Lys Ser Phe Leu Gln Phe Ser Ala Met Lys Met Ala His Ser
              180               185               190
    Pro Pro Gly His His Ser Val Thr Gly Arg Pro Ser Val Asn Gly Leu
              195               200               205
    Ala Leu Ala Glu Tyr Val Ile Tyr Arg Gly Glu Gln Ala Tyr Pro Glu
              210               215               220
    Tyr Leu Ile Thr Tyr Gln Ile Met Arg Pro Glu Gly Met Val Asp Gly
    225.              230               235               240
```

```
<210> 6267
<211> 328
<212> DNA
<213> Homo sapiens

<400> 6267
gggccctccg gttttctcag ccctggtggg tgaggttggt ggccagggcc tgggccaatc
60

gggagagggg agggctaagc agagtgggga tgcccggcag tgacccagcc tctctcccca
120

gatgagcctt tcctgcagtt ccgaaggaac gtgttcttcc caaagcggcg ggagctccag
180

atccatgacg aggaggtcct gcggctgctc tatgaggagg ccaagggcaa cgtgctggct
240

gcacggtacc cgtgcgacgt ggaggactgc gaggctctgg gcgccctggt gtgccgcgtg
300

cagcttgggc cctaccagcc cggccggc
328

<210> 6268
<211> 83
<212> PRT
<213> Homo sapiens
```

<400> 6268
Ala Glu Trp Gly Cys Pro Ala Val Thr Gln Pro Leu Ser Pro Asp Glu
 1   5   10   15
Pro Phe Leu Gln Phe Arg Arg Asn Val Phe Phe Pro Lys Arg Arg Glu
            20   25   30
Leu Gln Ile His Asp Glu Glu Val Leu Arg Leu Leu Tyr Glu Glu Ala
        35   40   45
Lys Gly Asn Val Leu Ala Ala Arg Tyr Pro Cys Asp Val Glu Asp Cys
    50   55   60
Glu Ala Leu Gly Ala Leu Val Cys Arg Val Gln Leu Gly Pro Tyr Gln
65   70   75   80
Pro Gly Arg

<210> 6269
<211> 923
<212> DNA
<213> Homo sapiens

<400> 6269
nggcggaaga tggcgacgcc cctcgggtgg tcgaaggcgg ggtcaggatc tgtgtgtctc
60
gctttagatc aactgcggga cgtgattgag tctcaggagg aactaatcca ccagctgagg
120
aacgtgatgg ttctccagga cgaaaatttt gtcagtaaag aagagttcca ggcagtggag
180
aagaagctgg tggaagagaa agctgcccat gccaaaacca aggtcctcct ggccaaggaa
240
gaggagaagt tacagtttgc cctcggagag gtagaggtgc tatccaagca gctggagaaa
300
gagaagctgg cctttgaaaa agcgctctcc agtgtcaaga gcaaagtcct tcaggagtcc
360
agcaagaagg accagctcat caccaagtgc aatgagattg agtctcacat tataaagcaa
420
gaagatatac ttaatggcaa agagaatgag attaaagagt tgcagcaagt tatcagccag
480
cagaaacaga tcttcagccc accaccagcc ggctccgttg caggaatcac atgtctgact
540
tccggatcca gaagcagcag gaaagctaca tggcccaggt gctggaccag aagcataaga
600
aagcctcagg acacgtcag gcccgcagcc accagcatcc cagggaaaaa taaaatggcc
660
gccgctttcc tgttctctgg ctgtaatccc cagcctctgc cttctctgct ctgggagtcc
720
ccagcctcta gccctgcta cttccctccc tcttggatag tggtaggggt ccacaaggtg
780
ggggcttgta gcctagggga ggagctgggt ctttgttgtc tggtaggcac caccgcttcc
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900
actcccagtg tcctggtaaa ttt
923

<210> 6270

<211> 307
<212> PRT
<213> Homo sapiens

<400> 6270
Xaa Arg Lys Met Ala Thr Pro Leu Gly Trp Ser Lys Ala Gly Ser Gly
 1   5   10   15
Ser Val Cys Leu Ala Leu Asp Gln Leu Arg Asp Val Ile Glu Ser Gln
            20   25   30
Glu Glu Leu Ile His Gln Leu Arg Asn Val Met Val Leu Gln Asp Glu
        35   40   45
Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
    50   55   60
Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
65   70   75   80
Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
                85   90   95
Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
            100   105   110
Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
        115   120   125
Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
    130   135   140
Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
145   150   155   160
Gln Lys Gln Ile Phe Ser Pro Pro Ala Gly Ser Val Ala Gly Ile
            165   170   175
Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
            180   185   190
Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
        195   200   205
Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
    210   215   220
Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
 225   230   235   240
Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
            245   250   255
Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
            260   265   270
Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Pro Ser Tyr
            275   280   285
Ile Asn Ser Pro Gly Tyr Pro Val Ile Phe His Pro Thr Pro Ser Val
    290   295   300
Leu Val Asn
305

<210> 6271
<211> 1437
<212> DNA
<213> Homo sapiens

<400> 6271
nccatggcga cgggcggcca gcagaaggag aacacgctgc ttcacctctt cgccggcggg
60

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tgtggaggca cagttggtgc tattttcact tgtccactag aagtcattaa gacacggttg
120
cagtcttcaa gattagctct ccggacagtc tactatcctc aggttcatct ggggaccatt
180
agtggagctg gaatggtgag accaacatcc gtgacacctg gactctttca ggttctgaag
240
gctgtatact ttgcatgtta ctccaaagcc aaagagcaat ttaatggcat tttcgtgcct
300
aacagcaata ttgtgcatct tttctcagct ggctctgcag ctttttatcac aaaattcctta
360
atgaatccta tatggatggt taaaacccga atgcagctag aacagaaagt gaggggctct
420
aagcagatga atacactcca gtgtgctcgt tacgtttacc agaccgaagg cattcgtggc
480
ttctatagag gattaactgc ctcgtatgct ggaatttccg aaactataat ctgctttgct
540
atttatgaaa gtttaaagaa gtatctgaaa gaagctccat tagcctcttc tgcaaatggg
600
actgagaaaa attccacaag ttttttttgga cttatggcag ctgctgctct ttctaagggc
660
tgtgcctcct gcattgctta tccacacgaa gtcataagga cgaggctccg ggaagagggc
720
accaagtaca agtcttttgt ccagacggcg cgcctggtgt ccgggaaga aggctacctt
780
gcctttttata gaggactgtt tgcccagctt atccggcaga tcccaaatac tgccattgtg
840
ttgtctactt atgagttaat tgtgtacctg ttagaagacc gtactcagta acaggccgga
900
aaattgtgct ctagaagaat aaaactgaaa aactctagag aatttttttt ccccattgat
960
gtttagaaag tttgagactg aaacaggaaa ggccataaaa tatctggttc atatcacctg
1020
ttggacattt cctttttggat tcatgctttc tggaaggttt aaattcatta acgttaatag
1080
ttaattataa cttttttttt aacttaagag gattcagggt taagcaccaa ctaaattaaa
1140
tcatgctatt taatttaagt atacatttgg cttgtgtcct cttttatgct cactatacta
1200
tgaaggactt aagtaattca gataaacctg ccctagaact gcagagaaaa atgataaagt
1260
gagaatacaa cttgtttttat aatctgactt taagatcttg cactgctaga cagggaagaa
1320
gtgtcgcatt ttggctgggc actgtggctc acgcctgtaa tcccagcact ttgggaggcc
1380
gaggtgggtg gatcacaagg tcaggagatc gagaccatcc tggctaacca cctgcag
1437
```

```
<210> 6272
<211> 296
<212> PRT
<213> Homo sapiens
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```
<400> 6272
Xaa Met Ala Thr Gly Gly Gln Gln Lys Glu Asn Thr Leu Leu His Leu
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```
  1                 5                      10                    15
Phe Ala Gly Gly Cys Gly Gly Thr Val Gly Ala Ile Phe Thr Cys Pro
            20                        25                    30
Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg
            35                        40                    45
Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly
            50                        55                    60
Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys
65                        70                        75                    80
Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly
                85                        90                    95
Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser
                100                       105                   110
Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys
            115                       120                   125
Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn
            130                       135                   140
Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly
145                       150                       155                   160
Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile
                165                       170                   175
Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala
                180                       185                   190
Pro Leu Ala Ser Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe
            195                       200                   205
Phe Gly Leu Met Ala Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys
            210                       215                   220
Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly
225                       230                       235                   240
Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu
                245                       250                   255
Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg
                260                       265                   270
Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val
            275                       280                   285
Tyr Leu Leu Glu Asp Arg Thr Gln
    290                   295
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<210> 6273
<211> 2355
<212> DNA
<213> Homo sapiens

<400> 6273
ncgaggatca ttgcagaggc cctgactcga gtcatctaca acctgacaga gaaggggaca
60
ccccagacat gccggtgttc acagagcaga tgatccagca ggagcagctg gactcggtga
120
tggactggct caccaaccag ccgcggccgg cagctggtgg acaaggacag caccttcctc
180
agcacgctgg agcaccacct gagccgctac ctgaaggacg tgaagcagca ccacgtcaag
240
gctgacaagc gggacccaga gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300

tacagagtca agccggccgt ctttgacctg ctcctggctg ttggcattgc tgcctacctc
360
ggcatggcct acgtggctgt ccaggtgagc agtgcccagg ctcagcactt cagcctcctc
420
tacaagaccg tccagaggct gctcgtgaag gccaagacac agtgacacag ccacccccac
480
agccggagcc cccgccgctc cacagtccct ggggccgagc acgagtgagt ggacactgcc
540
ccgccgcggg cggccctgca gggacagggg ccctctccct ccccggcggt ggttggaaca
600
ctgaattaca gagctttttt ctgttgctct ccgagactgg gggggggattg tttcttcttt
660
tccttgtctt tgaacttcct tggaggagag cttgggagac gtcccggggc caggctacgg
720
acttgcggac gagcccccca gtcctgggag ccggccgccc tcggtctggt gtaagcacac
780
atgcacgatt aaagaggaga cgccgggacc ccctgcccga tcgcgcgcgg cctccgccca
840
ccgcctcctg ccgcaagggg cctggactgc aggcctgacc tgctccctgc tccgtgtctg
900
tcctaggacg tcccctcccg ctccccgatg gtggcgtgga catggttatt tatctctgct
960
ccttcttgcc tggaggaggg cagtgccagc cctgggttc tgggattcca gccctcctgg
1020
agccttttgt tccccatgtg gtctcagtga cccgtccccc tgacagtggg ctcggggagc
1080
tgcatcaccc agccttcccc ttctccgact gcagggtctg atgtcatcgt tgacagcctt
1140
tgcttcgtgg gggcctggca ggcctgnncc tccccgaccc ccgacccact gcaaaccccc
1200
gttcccctgc actcctcttc tcccagccca tccctccggc ccctgtgcct ctgcggcccc
1260
agcccagctc ccagggccgt cacctgcttg ccctggcca gctccctgcc ctgagtcctg
1320
agccagtgcc tggtgtttcc tgggctcggt actgggcccc caggcnatcc agggctttgc
1380
acggccagtt ggtcctccct ggggaactgg gtgcgggtgg agtactggga ggcaggaggt
1440
ggcccggggga ggccttgtgg ctcctcccct cgctcctcgc cctgggcctc aagttcctca
1500
tcaatagaaa ggatgtgttc ggggtggggg cgtcaggtga gaacgtttgc tgggaaggag
1560
aggacttggg gcatggctct ggggcaccct tcctggaact cagagaggaa ggtccgggcc
1620
ctcgggaagc cttggacaga accctccacc ccgcagacca ggcgtcgtgt gtgtgtggga
1680
gagaaggagg cccgtgttga gctcagggag accccggtgt gtccgttctt tagcaatata
1740
acctacccag tgcgtgccga gcaggcttgg tggggaaggg acttgagctg ggcaagtcct
1800
ggcctggcac ccgcagccgt ctcccttccg tggcccaggg aggtgtttgc tgtccgaagg
1860
acctgggccg gcccatggga gcctggggtt ctgtccagat aggaccaggg ggtctcactt
1920

tggccaccag ttcttcggcc agcacctctg ccctccagaa cctgcagcct ggaggggtga
1980

ggggacaacc accctctttt cctccaggtt ggcaggggac cctcttctcc cgtctgccct
2040

gcgggttgcc cgcctcctcc agagacttgc ccaagggccc atcaccactg gcctctgggc
2100

acttgtgctg agactctggg acccaggcag ctgccacctt gtcaccatga gagaatttgg
2160

ggagtgcttg catgctagcc agcaggctcc tgtctgggtg ccacggggcc agcattttgg
2220

agggagcttc cttccttcct tcctggacag gtcgtcagga tggatgcact gactgaccgt
2280

ctggggctca ggctggtgtg ggatgcagcc ggccgatgag aaaataaagc catattgaat
2340

gatcaaaaaa aaaaa
2355

<210> 6274
<211> 70
<212> PRT
<213> Homo sapiens

<400> 6274
Asp Pro Glu Phe Val Phe Tyr Asp Gln Leu Lys Gln Val Met Asn Ala
1   5   10   15
Tyr Arg Val Lys Pro Ala Val Phe Asp Leu Leu Leu Ala Val Gly Ile
            20   25   30
Ala Ala Tyr Leu Gly Met Ala Tyr Val Ala Val Gln Val Ser Ser Ala
        35   40   45
Gln Ala Gln His Phe Ser Leu Leu Tyr Lys Thr Val Gln Arg Leu Leu
    50   55   60
Val Lys Ala Lys Thr Gln
65   70

<210> 6275
<211> 1534
<212> DNA
<213> Homo sapiens

<400> 6275
gggcggtagc gacaggccag agctgcggcc tgagcagcca gcgtccggca tgaaggtctg
60

gggtctggct gctgcctgct tcttgctcca gcaccatgga atgcctgcgc agtttaccct
120

gcctcctgcc ccgcgcgatg agacttcccc ggcggacgct gtgtgccctg gccttggacg
180

tgacctctgt gggtcctccc gttgctgcct gcggccgccg agccaacctg attggaagga
240

gccgagcggc gcagctttgc gggcccgacc ggctccgcgt ggcaggtgaa gtgcaccggt
300

ttagaacctc tgacgtctct caagccactt tagccagtgt agccccagta tttactgtga
360

caaaatttga caaacaggga aacgttactt cttttgaaag gaagaaaact gaattatacc
420

```
aagagttagg tcttcaagcc agagatttga gatttcagca tgtaatgagt atcacagtca
480
gaaacaatag gattatcatg agaatggagt atttgaaagc tgtgataact ccagagtgtc
540
ttctgatatt agattatcgt aatttaaact tagagcaatg gctgttccgg gaactccctt
600
cacagttgtc tggagagggt caactcgtta catacccttt accttttgag tttagagcta
660
tagaagcact cctgcaatat tggatcatgt tgttatctag atcaacaccc ttcaggggaa
720
acttagcatt ttgcagccac tgatccttga gaccttggat gctttggtgg accccaaaca
780
ttcttctgta gacagaagca aactgcacat tttactacag aatggcaaaa gtctatcaga
840
gttagaaaca gatattaaaa ttttcaaaga gtcaattttg gagatcttgg atgaggaaga
900
gttgctagaa gagctctgtg tatcaaaatg ggagtgaccc acaagtcttt gnaaaagagc
960
agtgctggga ttgaccatgc agaagaaatg gagttgctgt tggaaaacta ctaccgattg
1020
gctgacgatc tctccaatgc agctcgtgag cttagggtgc tgattgatga ttcacaaagt
1080
attattttca ttaatctgga cagccaccga aacgtgatga ttaggttgaa tctacagctg
1140
accatgggaa ccttctctct ttcgctcttt ggactaatgg gagttgcttt tggaatgaat
1200
ttggaatctt cccttgaaga ggaccataga attttttggc tgattacagg aattatgttc
1260
atgggaagtg gcctcatctg gaggcgcctg ctttcattcc ttggacgaca gctagaagct
1320
ccattgcctc ctatgatggc ttctttacct aaaaagactc ttctggcaga tagaagcatg
1380
gaattgaaaa atagcctcag actggatgga cttggatcag gaaggagcat cctaacaaac
1440
cgttaggaac agccccgtgg atactgaagt ttttttttatg gtagttacag gaaacttctg
1500
atactctttt tattattttc ttgtatagag tcag
1534
```

```
<210> 6276
<211> 172
<212> PRT
<213> Homo sapiens
```

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<400> 6276
Met Gly Val Thr His Lys Ser Leu Xaa Lys Ser Ser Ala Gly Ile Asp
1               5                   10                  15
His Ala Glu Glu Met Glu Leu Leu Leu Glu Asn Tyr Tyr Arg Leu Ala
            20                  25                  30
Asp Asp Leu Ser Asn Ala Ala Arg Glu Leu Arg Val Leu Ile Asp Asp
        35                  40                  45
Ser Gln Ser Ile Ile Phe Ile Asn Leu Asp Ser His Arg Asn Val Met
    50                  55                  60
Ile Arg Leu Asn Leu Gln Leu Thr Met Gly Thr Phe Ser Leu Ser Leu
```

```
65                    70                    75                    80
Phe Gly Leu Met Gly Val Ala Phe Gly Met Asn Leu Glu Ser Ser Leu
                 85                    90                    95
Glu Glu Asp His Arg Ile Phe Trp Leu Ile Thr Gly Ile Met Phe Met
                100                   105                  110
Gly Ser Gly Leu Ile Trp Arg Arg Leu Leu Ser Phe Leu Gly Arg Gln
        115                   120                   125
Leu Glu Ala Pro Leu Pro Pro Met Met Ala Ser Leu Pro Lys Lys Thr
        130                   135                   140
Leu Leu Ala Asp Arg Ser Met Glu Leu Lys Asn Ser Leu Arg Leu Asp
145                   150                   155                   160
Gly Leu Gly Ser Gly Arg Ser Ile Leu Thr Asn Arg
                 165                   170
```

<210> 6277
<211> 1206
<212> DNA
<213> Homo sapiens

<400> 6277
gctagcatgg cggtgatgga aggagacttg gtgaagaagg aaagctttgg tgtgaagctt
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atggacttcc aggcccaccg gcggggtggc actctaaata gaaagcacat atcccccgct
120
ttccagccgc cacttccgcc cacagatggc agcaccgtgg tgcccgctgg cccagagccc
180
cctcccccaga gctctagggc tgaaagcagc tctggggggtg ggactgtccc ctcttccgcg
240
ggcatactgg agcaggggcc gagcccaggc gacggcagtc ctcccaaacc gaaggaccct
300
gtatctgcag ctgtgccagc accangggag aaacaacagt cagatagcat ctggccaaaa
360
tcagccccag gcagctgctg gctcccacca gctctccatg gccacctca caatgctgca
420
gggcccagcc cgcatacact gcgccgagct gttaaaaaac ccgctccagc accccccgaaa
480
ccgggcaacc cacctcctgg ccaccccggg ggccagagtt cttcaggaac atctcagcat
540
ccacccagtc tgtcaccaaa gccacccacc cgaagcccct ctcctccacc cagcacacgg
600
gccagcctcc aggccagccc tccgcccct cccagctctc agcaccccgg aggtactcca
660
ngcagcttgt ctccaatcca agctcccaat cacccaccgc cgcagccccc tacgcaggcc
720
acgccactga tgcacaccaa acccaatagc cagggcctc ccaacccat ggcattgccc
780
agtgagcatg gacttgagca gccatctcac acccctcccc agactccaac gcccccccagt
840
actccgcccc taggaaaaca gaaccccagt ctgccagctc ctcagaccct ggcaggggggt
900
aaccctgaaa ctgcacagcc acatgctgga accttaccga gaccgagacc agtaccaaag
960
ccaaggaacc ggcccagcgt gcccccaccc ccccaacctc ctggtgtcca ctcagctggg
1020
```

gacagcagcc tcaccaacac agcaccaaca gcttccaaga tagtaacaga ctccaattcc
1080
agggtttcag aaccgcatcg cagcatcttt cctgaaatgc actcagactc agccagcaaa
1140
gacgtgcctg gccgcatcct gctggatata gacaatgata ccgagagcac tgccctgtga
1200
agaaag
1206

<210> 6278
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6278
Ala Ser Met Ala Val Met Glu Gly Asp Leu Val Lys Lys Glu Ser Phe
 1   5   10   15
Gly Val Lys Leu Met Asp Phe Gln Ala His Arg Arg Gly Gly Thr Leu
            20   25   30
Asn Arg Lys His Ile Ser Pro Ala Phe Gln Pro Pro Leu Pro Pro Thr
        35   40   45
Asp Gly Ser Thr Val Val Pro Ala Gly Pro Glu Pro Pro Gln Ser
    50   55   60
Ser Arg Ala Glu Ser Ser Ser Gly Gly Gly Thr Val Pro Ser Ser Ala
 65   70   75   80
Gly Ile Leu Glu Gln Gly Pro Ser Pro Gly Asp Gly Ser Pro Pro Lys
                85   90   95
Pro Lys Asp Pro Val Ser Ala Ala Val Pro Ala Pro Xaa Glu Lys Gln
            100   105   110
Gln Ser Asp Ser Ile Trp Pro Lys Ser Ala Pro Gly Ser Cys Trp Leu
        115   120   125
Pro Pro Ala Leu His Gly Pro Pro His Asn Ala Ala Gly Pro Ser Pro
    130   135   140
His Thr Leu Arg Arg Ala Val Lys Lys Pro Ala Pro Ala Pro Pro Lys
145   150   155   160
Pro Gly Asn Pro Pro Pro Gly His Pro Gly Gly Gln Ser Ser Ser Gly
                165   170   175
Thr Ser Gln His Pro Pro Ser Leu Ser Pro Lys Pro Pro Thr Arg Ser
            180   185   190
Pro Ser Pro Pro Pro Ser Thr Arg Ala Ser Leu Gln Ala Ser Pro Pro
        195   200   205
Pro Pro Pro Ser Ser Gln His Pro Gly Gly Thr Pro Xaa Ser Leu Ser
    210   215   220
Pro Ile Gln Ala Pro Asn His Pro Pro Pro Gln Pro Pro Thr Gln Ala
225   230   235   240
Thr Pro Leu Met His Thr Lys Pro Asn Ser Gln Gly Pro Pro Asn Pro
                245   250   255
Met Ala Leu Pro Ser Glu His Gly Leu Glu Gln Pro Ser His Thr Pro
            260   265   270
Pro Gln Thr Pro Thr Pro Pro Ser Thr Pro Pro Leu Gly Lys Gln Asn
        275   280   285
Pro Ser Leu Pro Ala Pro Gln Thr Leu Ala Gly Gly Asn Pro Glu Thr
    290   295   300
Ala Gln Pro His Ala Gly Thr Leu Pro Arg Pro Arg Pro Val Pro Lys

```
305                     310                     315                     320
Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Pro Gln Pro Pro Gly Val
                325                     330                     335
His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala Pro Thr Ala Ser
                340                     345                     350
Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu Pro His Arg Ser
                355                     360                     365
Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys Asp Val Pro Gly
        370                     375                     380
Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser Thr Ala Leu
385                     390                     395
```

<210> 6279
<211> 2795
<212> DNA
<213> Homo sapiens

<400> 6279
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atggctgctg agaagcaggt cccaggcggc ggcggcggcg cggcggcag tggcggcggc
60
ggtggacgtg gtgccggagg ggaagaaaat aaagaaaacg aacgcccttc ggccggatcg
120
aaggcaaaca agaatttggg ggatagcctg agtttggaga ttcttcagat tattaaggaa
180
tcccagcagc agcatggttt acggcatgga gattttcaga ggtacagggg ctactgttcc
240
cgtagacaaa gacgtcttcg aaaaacactc aacttcaaga tgggtaacag acacaaattc
300
acagggaaga aagtgactga agagcttctg accgataata gatacttgct tctggttctg
360
atggatgctg aaagagcctg gagctacgcc atgcagctga acaggaagc caacactgaa
420
ccccgaaaac ggtttcactt gttatctcgc ctacgcaaag ccgtgaagca tgcagaggaa
480
ttggaacgct tgtgtaagag caatcgcgtg gatgccaaga ccaaattaga ggctcaggct
540
tacacagctt acctctcagg aatgctacgt tttgaacatc aagaatggaa agctgccatt
600
gaggctttta caaatgcaa aactatctat gagaagctag ccagtgcttt cacagaggag
660
caggctgtgc tgtataacca acgtgtggaa gagatttcac ccaacatccg ctattgtgca
720
tataatattg gggaccagtc agccatcaat gaactcatgc agatgagatt gaggtctggg
780
ggcactgaag tctcttggc tgaaaaattg gaggctttga tcactcagac tcgagccaaa
840
caggcagcta ccatgagtga agtggagtgg agagggagaa cggttccagt gaagattgac
900
aaagtgcgca ttttcttatt aggactggct gataacgaag cagctattgt ccaggctgaa
960
agcgaagaaa ctaaggagcg cctgtttgaa tcaatgctca gcgagtgtcg ggacgccatc
1020
caggtggttc gggaggagct caagccagat cagaaacaga gagattatat ccttgaagga
1080
```

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gagccaggga aggtgtctaa tcttcaatac ttgcatagct acctgactta catcaagcta
1140
tcaacggcaa tcaagcgtaa tgagaacatg gccaaaggtc tgcacagggc tctgctgcag
1200
cagcagccag aggatgacag caagcgctca ccccggcccc aggacctgat ccgactctat
1260
gacatcatct tacagaatct ggtggaattg ctccagcttc ctggtttaga ggaagacaaa
1320
gccttccaga aagagatagg cctcaagact ctggtgttca aagcttacag gtgttttttc
1380
attgctcagt cctatgtgct ggtgaagaag tggagcgaag cccttgtcct gtatgacaga
1440
gtcctgaaat atgcaaatga agtaaattct gatgctggcg ccttcaagaa cagcctaaag
1500
gacctgcctg atgtgcaaga gctcatcact caagtgcggt cagagaagtg ctccctgcag
1560
gccgcagcca tccttgatgc aaacgacgct catcaaacag agacctcctc ctcccaagtc
1620
aaggacaata agcctctggt tgaacggttt gagacattct gcctggaccc ttcccttgtc
1680
accaagcaag ccaaccttgt gcacttccca ccaggcttcc agcccattcc ctgcaagcct
1740
ttgttctttg acctggccct caaccatgtg gctttcccac cccttgagga caagttggaa
1800
cagaagacca agagtggcct cactggatac atcaagggca tctttggatt caggagctaa
1860
ccaggctctt cctcgggggc gggggagatt ctgactctta atctgtattg tgagaaaatc
1920
ccagcaagtt ccatgatatt aaatccaggt ctgcattggc ccggggcaag agtttaacat
1980
cttcggccct gcattcctac atcttgtgtc tgtacacgtt cttaagcagc gtgtcaggag
2040
agcaccctgt tgtcttctgg taaatgtgtg cagggtcatc ctgtctcctg tacctcctgg
2100
gaaaggggcc gctgctgtct ggtgccctgt gagctgtgat tgattgcctt tggtcagtaa
2160
tgcgttcagg agtccacacc aggcacagat ggggccttga aacgctttgt catgcttctt
2220
cagtaccatg gatttgaaat gaactcatcc ttgctgtgag catccaggag cccttgagaa
2280
gtttatctat gactatgaaa ctggcaacgt caccccagaa ttacggtcag ccttattccc
2340
cttcacctcc cagtgaacgc taagaagttt cagacaagca gagagctcta tttttagaag
2400
aaatatgtta cactcagaaa tgatgaaacc aaatcttata ttaaaaggca aagatgacgg
2460
agactgtgcc catttcttat atgccctccc tcatgtccag tccccgttct ctcctcggga
2520
gcctagttgc gtgaagccgg tgaggtcaag tgtaacctga cttaccggca actaggtgag
2580
gctgatgcca gatacacatg ttagaggcac tattttttcag gacttcccaa tgtgtaattt
2640
ttagatgcca ttatatttta atccccttcg ttaccccccg tttttcctta gtcatccctt
2700
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ttcacttcta ttataacatc aataatagaa gtcacaaaaa caatgtaaga aagcaaggaa
2760
taaaagtgat ttaaacatgt aaaaaaaaaa aaaaa
2795

<210> 6280
<211> 619
<212> PRT
<213> Homo sapiens

<400> 6280
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Met Ala Ala Glu Lys Gln Val Pro Gly Gly Gly Gly Gly Gly Gly Gly
 1               5                  10                  15
Ser Gly Gly Gly Gly Gly Arg Gly Ala Gly Gly Glu Glu Asn Lys Glu
                20                  25                  30
Asn Glu Arg Pro Ser Ala Gly Ser Lys Ala Asn Lys Glu Phe Gly Asp
                35                  40                  45
Ser Leu Ser Leu Glu Ile Leu Gln Ile Ile Lys Glu Ser Gln Gln Gln
        50                  55                  60
His Gly Leu Arg His Gly Asp Phe Gln Arg Tyr Arg Gly Tyr Cys Ser
65                  70                  75                  80
Arg Arg Gln Arg Arg Leu Arg Lys Thr Leu Asn Phe Lys Met Gly Asn
                85                  90                  95
Arg His Lys Phe Thr Gly Lys Lys Val Thr Glu Glu Leu Leu Thr Asp
                100                 105                 110
Asn Arg Tyr Leu Leu Leu Val Leu Met Asp Ala Glu Arg Ala Trp Ser
115                 120                 125
Tyr Ala Met Gln Leu Lys Gln Glu Ala Asn Thr Glu Pro Arg Lys Arg
        130                 135                 140
Phe His Leu Leu Ser Arg Leu Arg Lys Ala Val Lys His Ala Glu Glu
145                 150                 155                 160
Leu Glu Arg Leu Cys Lys Ser Asn Arg Val Asp Ala Lys Thr Lys Leu
                165                 170                 175
Glu Ala Gln Ala Tyr Thr Ala Tyr Leu Ser Gly Met Leu Arg Phe Glu
                180                 185                 190
His Gln Glu Trp Lys Ala Ala Ile Glu Ala Phe Asn Lys Cys Lys Thr
        195                 200                 205
Ile Tyr Glu Lys Leu Ala Ser Ala Phe Thr Glu Glu Gln Ala Val Leu
        210                 215                 220
Tyr Asn Gln Arg Val Glu Glu Ile Ser Pro Asn Ile Arg Tyr Cys Ala
225                 230                 235                 240
Tyr Asn Ile Gly Asp Gln Ser Ala Ile Asn Glu Leu Met Gln Met Arg
                245                 250                 255
Leu Arg Ser Gly Gly Thr Glu Gly Leu Leu Ala Glu Lys Leu Glu Ala
                260                 265                 270
Leu Ile Thr Gln Thr Arg Ala Lys Gln Ala Ala Thr Met Ser Glu Val
        275                 280                 285
Glu Trp Arg Gly Arg Thr Val Pro Val Lys Ile Asp Lys Val Arg Ile
        290                 295                 300
Phe Leu Leu Gly Leu Ala Asp Asn Glu Ala Ala Ile Val Gln Ala Glu
305                 310                 315                 320
Ser Glu Glu Thr Lys Glu Arg Leu Phe Glu Ser Met Leu Ser Glu Cys
                325                 330                 335
Arg Asp Ala Ile Gln Val Val Arg Glu Glu Leu Lys Pro Asp Gln Lys
```

```
            340                   345                   350
Gln Arg Asp Tyr Ile Leu Glu Gly Glu Pro Gly Lys Val Ser Asn Leu
            355                   360                   365
Gln Tyr Leu His Ser Tyr Leu Thr Tyr Ile Lys Leu Ser Thr Ala Ile
        370                   375                   380
Lys Arg Asn Glu Asn Met Ala Lys Gly Leu His Arg Ala Leu Leu Gln
385                   390                   395                   400
Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln Asp Leu
                    405                   410                   415
Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
            420                   425                   430
Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
            435                   440                   445
Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
    450                   455                   460
Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr Asp Arg
465                   470                   475                   480
Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
                485                   490                   495
Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
                500                   505                   510
Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
            515                   520                   525
Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
        530                   535                   540
Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser Leu Val
545                   550                   555                   560
Thr Lys Gln Ala Asn Leu Val His Phe Pro Pro Gly Phe Gln Pro Ile
                565                   570                   575
Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val Ala Phe
                580                   585                   590
Pro Pro Leu Glu Asp Lys Leu Glu Gln Lys Thr Lys Ser Gly Leu Thr
            595                   600                   605
Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser
    610                   615
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<210> 6281
<211> 741
<212> DNA
<213> Homo sapiens

<400> 6281
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cctaagccgc ggggcccctc gctgcccctc gaggcccttt ccctgaccta ggctttggcc
120
tgggctactc gttccggagc cgccatgtcg tccgacttcg aaggttacga gcaggacttc
180
gcggtgctca ctgcagagat caccagcaag attgcgaggg tcccacgact cccgcctgat
240
gaaaagaaac agatggttgc aaatgtggag aaacagcttg aagaagcgaa agaactgctt
300
gaacagatgg atttggaagt ccgagagata ccaccccaaa gtcgagggat gtacagcaac
360
```

agaatgagaa gctacaaaca agaaatggga aaactcgaaa cagattttaa aaggtcacgg
420
atcgcctaca gtgacgaagt acggaatgag ctcctggggg atgatgggaa ttcctcagag
480
aaccagaggg cacatctgct cgataacaca gagaggctgg aaaggtcatc tcggagacta
540
gaggctggat accaaatagc agtggaaacc ggtgagaatt ctgagagtga gcaaattgtc
600
ttgcttatgc acagcagtct tcacaacaca tgacatttca gggaaacttc aaaggagtag
660
cagagacagc agcccgagat gtggtttaca tattggggag acaattggga gcttatctgc
720
gcttatcttt ttgcaagtta g
741

<210> 6282
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6282
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Met Ser Ser Asp Phe Glu Gly Tyr Glu Gln Asp Phe Ala Val Leu Thr
 1               5                  10                  15
Ala Glu Ile Thr Ser Lys Ile Ala Arg Val Pro Arg Leu Pro Pro Asp
            20                  25                  30
Glu Lys Lys Gln Met Val Ala Asn Val Glu Lys Gln Leu Glu Glu Ala
        35                  40                  45
Lys Glu Leu Leu Glu Gln Met Asp Leu Glu Val Arg Glu Ile Pro Pro
    50                  55                  60
Gln Ser Arg Gly Met Tyr Ser Asn Arg Met Arg Ser Tyr Lys Gln Glu
65                  70                  75                  80
Met Gly Lys Leu Glu Thr Asp Phe Lys Arg Ser Arg Ile Ala Tyr Ser
                85                  90                  95
Asp Glu Val Arg Asn Glu Leu Leu Gly Asp Asp Gly Asn Ser Ser Glu
            100                 105                 110
Asn Gln Arg Ala His Leu Leu Asp Asn Thr Glu Arg Leu Glu Arg Ser
        115                 120                 125
Ser Arg Arg Leu Glu Ala Gly Tyr Gln Ile Ala Val Glu Thr Gly Glu
    130                 135                 140
Asn Ser Glu Ser Glu Gln Ile Val Leu Leu Met His Ser Ser Leu His
145                 150                 155                 160
Asn Thr
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<210> 6283
<211> 2312
<212> DNA
<213> Homo sapiens

<400> 6283
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agcaaggact ggaaggaacc agagacaaac aaggtggttg ggtttgctgg gagtgggatg
120

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gtagctaagc atgtcattta ctgttcttgt tgcttgggta ataggccaca atgaggaagc
180
tagcacggta gtgggcaatg ccaggtggga aggtttgagt tgtgaaagaa gagccaggga
240
gcagagatgg ggaggaggca ctgatggggt gggatgtgct ttggtcacac atagcacagt
300
cgggtgtgtc ctcccttttg tccacagtgg ttcctgggct ttgctgtctt cctcctgccc
360
tgggcgtcca tgtggctgcg cagcctccta aaacctatcc acgtcttttt tggagccgcc
420
atcctctctc tgtccatcgc atccgtcatt tcgggcatta atgagaagct tttcttcagt
480
ttgaaaaaca ccaccaggcc ataccacagc ctgcccagtg aggcggtctt tgccaacagc
540
accgggatgc tggtggtggc ctttgggctg ctggtgctct acatccttct ggcttcatct
600
tggaagcgcc cagagccggg gatcctgacc gacagacagc ccctgctgca tgatggggag
660
tgaagcagca ggaaggggct cccaagagct cctggtggtg cagcctgtgc tcccctcaga
720
agctctgctc ttcccagggc tcccggctgg tttcagcagg cgactttctt ccaatgctgg
780
gcccagactt cttgcctggg tgctggcctg ccctctccgg ccgcttgctg cctgtctgct
840
ttccttggtg gctttgcctg ggtgctgggc ctgccctctc cggccgcttg ctgcctgtct
900
gctttccttg gtggctttgc ctgggtgctg ggcctgcctt ctctggctgc ttgctgcctg
960
tctgctttcc ttggtggctt tggcttctgc actccttggc gtcagcctct caggtcctcc
1020
attcacacga ggtcctcctc gctctggccg ctcttgctgc tcctgtctga agaaatcaga
1080
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1140
cggtgtgaaa catgagggag gtgaggtgtc cgtccacttc ccccataaag gtgtgcattt
1200
cagttaggct gccccgccac agagcaggct tcatctgctc tgccatccag ccccatctgg
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1320
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1380
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1440
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1500
ggtgacctgc tctcccaaga acagagcctg tccccagatg tcccagtagc gatgagtaac
1560
agaggtggct gtggacttcc tctacttctc cttgctggat cagggccttc ctgcctcccg
1620
ctgggcaggt ctggccttgc tctcttggca gggccccagc ccctctgacc actctgcagc
1680
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1740
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gccaccttca gaggggttcc ttgctgagac ccacattgct tcacctggcc ccaccatggc
1800
tgcttgcctg gcccaaccta gcgttctgtg ccatgctaga gcttgagctg ttgctcttct
1860
tcaggggagg aaatagggtg gagagcggga agggtcttgc tcctaagtgt tgctgctgtg
1920
gctttttttgc cttctccaaa gacgcactgc caggtcccaa gcttcagact gctgtgctta
1980
gtaagcaagt gagaagcctg gggtttggag cccacctact ctctggcagc atcagcatcc
2040
tactcctggc aacatcaggc caacgtccac cccagcctca cattgccaga tgttggcaga
2100
agggctaata ttgaccgtct tgactggctg gagccttcaa agccactggg atgtcctcca
2160
ggcacctggg tcccatgacc agctccccgt ctccataggg gtaggcattt cactggttta
2220
tgaagctcga gtttcattaa atatgttaag aatcaaagct gtctttgttc aggctgctat
2280
aacaaaaata taatagcctg ggtggcttaa ac
2312

<210> 6284
<211> 122
<212> PRT
<213> Homo sapiens

<400> 6284
His Ser Arg Val Cys Pro Pro Phe Cys Pro Gln Trp Phe Leu Gly Phe
1   5   10   15
Ala Val Phe Leu Leu Pro Trp Ala Ser Met Trp Leu Arg Ser Leu Leu
                20   25   30
Lys Pro Ile His Val Phe Phe Gly Ala Ala Ile Leu Ser Leu Ser Ile
            35   40   45
Ala Ser Val Ile Ser Gly Ile Asn Glu Lys Leu Phe Phe Ser Leu Lys
        50   55   60
Asn Thr Thr Arg Pro Tyr His Ser Leu Pro Ser Glu Ala Val Phe Ala
65   70   75   80
Asn Ser Thr Gly Met Leu Val Val Ala Phe Gly Leu Leu Val Leu Tyr
                85   90   95
Ile Leu Leu Ala Ser Ser Trp Lys Arg Pro Glu Pro Gly Ile Leu Thr
            100   105   110
Asp Arg Gln Pro Leu Leu His Asp Gly Glu
        115   120

<210> 6285
<211> 2542
<212> DNA
<213> Homo sapiens

<400> 6285
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ctggagaaat atgtggggggc aagagtcccc aggtggggac agggaaagtg ttgaagcctg
120

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gccactactg ggcagggaag acagagttgc cactgtatgc acaggggatg agcagctgcc
180
ggtactccag gggcaggtgc cgctccacta gcacgtgcag tgagacttgg tcagtgacca
240
ggccctgccg ccgcatcagc agctccaggt cctctggctt cacagtcttg cggccagcat
300
gagcagcaaa tacctccaga tcatcacaaa gatgctggaa atatttatct aggcacttct
360
ccaccatctc aagagccttc ctctccatgg gcatcttggc atagaagcta aagagtttca
420
catagtgctc agtccagcct tgtggggatc ttgccggggc ctggggccgg tggtccgggc
480
ctagggggat gcctgaccaa cagaggctct gcaggctctg aagataagac tgcagcacca
540
ggcgctgggg ctggctcaag aaactgatga tgtcgcctgg cctggagaga ctcaggggtg
600
ctggaggccg actctggact tgctgccctg ccagaggcat cctcatcccc tgaagatgct
660
cctggcccgt cagcctcagc agtcccctgg gatccctctg cttctgtcac ctctgtgtgt
720
ccctcagcct cttctaccct gctgggtcct tgtgctcctg ttgcctccat ttcactcaca
780
ctcacacctt cttcttccat cttttttctct gcctcttcaa ctccatcgtg taagggctct
840
acttcatctt ctccagagac accactgctg gtgctcagga agcccagagc aaaggcattg
900
acctcctctg cctctcctgc cagaaactgg gctggtttcc cagggcctga gtgaagggga
960
gagaatacag gccggagacg cagcaggcca aggctgcata gctcagagaa gggtaaagat
1020
ggactctgct cttggatgaa ggaggcagcc acagccaggg tgctctaggg gcacagaggg
1080
gcttgaggaa ggaaaactac cattgtcaac tctcacccaa gctaaatttg gctccaggcc
1140
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1200
ccggcagcct gctcagcgtc ttcagcccca gtgtgaggcg tgcagggcag ggagtgatac
1260
acgttggggg agccaaccat gggctgagag aacggctggg tgtcctccaa cacaatgttg
1320
gagggagcca gggaagtatc tcgcagatcc cgcaaaaagg cacccacgtc tacagctcgg
1380
cgggctggag gtctgcgggc caagccaggc ctctgcactg actgtggctg aagaggtgtg
1440
gcaaaggtca ggttgaggga tctggtgagg gaagaggcat cagcattccc ttgaggctct
1500
tgggagagag acagcccctg gtccactccc tgctgaaaca ctgacagtct cagcctctgt
1560
ttcctcctgc caggggccag cagacctgga gccagggttg tgggggggctc gagctcagga
1620
agttgcagct ccaggctgcc gcaactgctc tcttgtctgg agggttggac cgcctgcggt
1680
gctggcactg gcttcactac cgactcaggc atcaggatgg aagattctgg ggcagttagt
1740
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aggatgttct tcagcagcgt ccgaggtgtc tgttcctcca agtgcccact ggcctgaata
1800
tgggccgatc tgccaacaga cctggctcca tgggaacgcc ctctggctat cgtccttgtt
1860
tggccactca acttcctggg ggaagccgtt tcaagcaggg ctctccgggc tccagcccga
1920
gcactccggg gtcgccgcgg ggtgcgcggg tccgctgtat ccagcacgcg tcgcagcagc
1980
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2040
cctaaccgcc cagccagctg caggctccgc cttcccgccg ccacagttaa tgtaactctc
2100
gcgatgctcc cgcacagccc cacgggaatt gtagttctcg cactatcgca gctcgcgggg
2160
tggacagtga tggttgcaaa ctccggatgc tttggaggca gcctcgctgc gggtaaacct
2220
cggttaatgt aatgcaagca gcccaagtct tggcttcttc atcatattct gttagtgttt
2280
tcctccgtat ttttcactgg ttgacaatcc tctcacctta agttttcatg gcaactgaat
2340
tagaacttgg tttctgagtc ttccgtggag ttcagtttcc cagaatctat aattccatct
2400
attcgggaaa gtgaggcagg agcattgctt gatccttggg aggcagaggt tgcatatctg
2460
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2520
ttcccacttc cctgttcaaa ta
2542

<210> 6286
<211> 57
<212> PRT
<213> Homo sapiens

<400> 6286
Pro Gly Pro Ala Ala Ala Ser Ala Ala Pro Gly Pro Leu Ala Ser Gln
  1   5   10   15
Ser Cys Gly Gln His Glu Gln Gln Ile Pro Pro Asp His His Lys Asp
            20   25   30
Ala Gly Asn Ile Tyr Leu Gly Thr Ser Pro Pro Ser Gln Glu Pro Ser
        35   40   45
Ser Pro Trp Ala Ser Trp His Arg Ser
    50   55

<210> 6287
<211> 1674
<212> DNA
<213> Homo sapiens

<400> 6287
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agcaagccgc acctggagaa gctgaccctg ggcatcacgc gcatcctaga atcttcccca
120

5471

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ggtgtgactg aggtgaccat catagaaaag cctcctgctg aacgtcatat gatttcttcc
180
tgggaacaaa agaataactg tgtgatgcct gaagatgtga agaactttta cctgatgacc
240
aatggcttcc acatgacatg gagtgtgaag ctggatgagc acatcattcc actgggaagc
300
atggcaatta acagcatctc aaaactgact cagctcaccc agtcttccat gtattcactt
360
cctaatgcac ccactctggc agacctggag gacgatacac atgaagccag tgatgatcag
420
ccagagaagc ctcactttga ctctcgcagt gtgatatttg agctggattc atgcaatggc
480
agtgggaaag tttgccttgt ctacaaaagt gggaaaccag cattagcaga agacactgag
540
atctggttcc tggacagagc gttatactgg cattttctca cagacacctt tactgcctat
600
taccgcctgc tcatcaccca cctgggcctg ccccagtggc aatatgcctt caccagctat
660
ggcattagcc cacaggccaa gcaatggttc agcatgtata aacctatcac ctacaacaca
720
aacctgctca cagaagagac cgactccttt gtgaataagc tagatcccag caaagtgttt
780
aagagcaaga caagatcgt aatcccaaaa aagaaagggc ctgtgcagcc tgcaggtggc
840
cagaaagggc cctcaggacc ctccggtccc tccacttcct ccacttctaa atcctcctct
900
ggctctggaa accccacccg gaagtgagca cccctccctc caactcccta ccagctccag
960
agtggtggtt tccatgcaca gatggcccta ggggtgacct ccagttttgc gtgtggaccg
1020
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1080
caggctcgta gtgaggcctc cagagcaggt tgtgctgtcc cctgcctctg gaagcaatgg
1140
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1200
ctcaaccctc aatcccttag cactgattga ttagagaggt cccccaaaga aaccactggt
1260
tttgacccat gaagcattag aactgcattg ttcattcagg agccactagt cacatatgac
1320
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1380
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1440
accacagaaa gttctgttgg acagcactgc attagaatat tttcatactg ctcttcctca
1500
attaattttt gttgttaatg ttgatgtctt cattggatgg gtcataatgt ccatgaaac
1560
ctctcaagta cacaattgta tgttctttgt atcccttacc acaaatatct cgctctgctc
1620
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1674
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<210> 6288

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<211> 269
<212> PRT
<213> Homo sapiens

<400> 6288
Pro Gly Val Thr Glu Val Thr Ile Ile Glu Lys Pro Pro Ala Glu Arg
1               5               10              15
His Met Ile Ser Ser Trp Glu Gln Lys Asn Asn Cys Val Met Pro Glu
            20              25              30
Asp Val Lys Asn Phe Tyr Leu Met Thr Asn Gly Phe His Met Thr Trp
        35              40              45
Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
    50              55              60
Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
65              70              75              80
Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
            85              90              95
Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
            100             105             110
Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
        115             120             125
Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Glu Ile Trp Phe
    130             135             140
Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
145             150             155             160
Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
            165             170             175
Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
            180             185             190
Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
    195             200             205
Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
    210             215             220
Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
225             230             235             240
Gly Gln Lys Gly Pro Ser Gly Pro Ser Gly Pro Ser Thr Ser Ser Thr
            245             250             255
Ser Lys Ser Ser Ser Gly Ser Gly Asn Pro Thr Arg Lys
            260             265

<210> 6289
<211> 1321
<212> DNA
<213> Homo sapiens

<400> 6289
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120
tgcgacaatc tcttctgtcc ggccagccgc tggagtcgtt aggtgccgcc ttgcttctga
180
cgagccacac gtttgcttct tccctgtgtt cccagctgga gggacatgag tgtccctggg
240
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ccgtcgtctc cggacggggc cctgacacgg ccaccctact gcctggaggc cggggagccg
300
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360
gacaaagcag tggagcaact ggcagaagga ttgctttctc attatttgcc agatctgcag
420
agatcaaaac aagccctcca ggaactcaca cagaaccaag ttgtattgtt agacacactg
480
gaacaagaga tttcaaaatt taaagaatgt cattctatgt tggatattaa tgctttgttt
540
gctgaggcta aacactatca tgccaagttg gtgaatataa gaaaagagat gctgatgctt
600
catgaaaaaa catcaaagtt aaaaaaaaga gcacttaaac tgcagcagaa gaggcaaaaa
660
gaagagttgg aaagggagca gcaacgagag aaggggtttg aaagagaaaa gcagttaact
720
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960
ttaaaattta ttattttgat cttgaattat ttataaactg gaaagtggtt tgattattgt
1020
gagtcaaaac tctaagtggt taaaaattag tatgaatttt ttagcttctt aatgaatatg
1080
gatttaaaac tctccagttc ttattttatg aaatgacttg cctttctggt aatacaatgc
1140
tgattttta gtaattgcct tttcattact ttgttaagaa gaaatgccag ctgtttaatc
1200
acacctaccc ctggaaaaga ggtaaacctt ttgaacagtt gaatttcatc agaagctcta
1260
tagcttttg gtgagaggaa gtgatactct ttattacaag aaacaaggaa ttaacaaaaa
1320
t
1321
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<210> 6290
<211> 172
<212> PRT
<213> Homo sapiens
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<400> 6290
Met Ser Val Pro Gly Pro Ser Ser Pro Asp Gly Ala Leu Thr Arg Pro
1               5                   10                  15
Pro Tyr Cys Leu Glu Ala Gly Glu Pro Thr Pro Gly Leu Ser Asp Thr
            20                  25                  30
Ser Pro Asp Glu Gly Leu Ile Glu Asp Leu Thr Ile Glu Asp Lys Ala
        35                  40                  45
Val Glu Gln Leu Ala Glu Gly Leu Leu Ser His Tyr Leu Pro Asp Leu
    50                  55                  60
Gln Arg Ser Lys Gln Ala Leu Gln Glu Leu Thr Gln Asn Gln Val Val
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65                     70                   75                      80
Leu Leu Asp Thr Leu Glu Gln Glu Ile Ser Lys Phe Lys Glu Cys His
                    85                  90                      95
Ser Met Leu Asp Ile Asn Ala Leu Phe Ala Glu Ala Lys His Tyr His
                   100                 105                     110
Ala Lys Leu Val Asn Ile Arg Lys Glu Met Leu Met Leu His Glu Lys
          115                 120                     125
Thr Ser Lys Leu Lys Lys Arg Ala Leu Lys Leu Gln Gln Lys Arg Gln
     130                 135                     140
Lys Glu Glu Leu Glu Arg Glu Gln Gln Arg Glu Lys Gly Phe Glu Arg
145                 150                     155                     160
Glu Lys Gln Leu Thr Ala Arg Pro Ala Lys Arg Met
                   165                 170
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<210> 6291
<211> 2718
<212> DNA
<213> Homo sapiens

<400> 6291
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tcggacagcg cccagactga ggcctgctac cacatgctga gccggcccca gccgccaccc
120
gacccctcc tgctccagcg tctgccacgg cccagctccc tgtcagacaa gacccagctc
180
cacagcaggt ggctggactc gtcgcggtgt ctcatgcagc agggcatcaa ggctggggac
240
gcactctggc tgcgcttcaa gtactacagc ttcttcgatt tggatcccaa gacagacccc
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480
gccctgagca acctggaggt gaagctggag gggtcggcgc ccacagatgt gctggacagc
540
ctcaccacca tcccagagct caaggactat ctccgaatct ttcggccccg gaagctgacc
600
ctgaagggct accgccaaca ctgggtggtg ttcaaggaga ccacactgtc ctactacaag
660
agccaggacg aggcccctgg ggaccccatt cagcagctca acctcaaggg ctgtgaggtg
720
gttccgatg ttaacgtctc cggccagaag ttctgcatta aactcctagt gccctcccct
780
gagggcatga gtgagatcta cctgcggtgc caggatgagc agcagtatgc ccgctggatg
840
gctggctgcc gcctggcctc caaaggccgc accatggccg acagcagcta caccagcgag
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960
cccccacggc ctgatgcctc tgccgagggc ctcaacccct acggcctcgt tgccccccgt
1020
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ttccagcgaa agttcaaggc caagcagctc accccacgga tcctggaagc ccaccagaat
1080
gtggcccagt tgtcgctggc agaggcccag ctgcgcttca tccaggcctg gcagtccctg
1140
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1200
ctgggcatcg ccaacaaccg actgatccgc atcgacttgg ccgtgggtga cgtggtcaag
1260
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1320
atcgagtttg atgaacacat caatgtggcc ttcagctgtg tgtctgccag ctgccgaatt
1380
gtacacgagt atatcggggg ctacattttc ctgtcgacgc gggagcgggc ccgtggggag
1440
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1500
tctgattgcc cctgccctgc tcaccaccct gtcacagcca ctcccaagcc cacacccaca
1560
ggggctcact gccccacacc cgctccaggc aggcacccag ctgggcattt cacctgctgt
1620
cactgacttt gtgcaggcca aggacctggc agggccagac gctgtaccat cacccaggcc
1680
agggatgggg gtgggggtcc ctgagctcat gtggtgcccc ctttccttgt ctgagtggct
1740
gaggctgata cccctgacct atctgcagtc ccccagcaca caaggaagac cagatgtagc
1800
tacaggatga tgaaacatgg tttcaaacga gttctttctt gttacttttt aaaatttctt
1860
ttttataaat taatatttta ttgttggatc ctcctccttt ctctggagct gtgcttgggg
1920
ctactctgac actctgtctc ttcatcacca gccaaggaaa ggggctttcg ggtagggcgt
1980
agctgcaggg cctccttgaa gtacttggga aggaggaagc catcagtatt ccctggagtc
2040
agaatcaccc cattggcaga gcggaagaag ggtattccat ctgccagagc caggggtcca
2100
tcgatgaaca cagctatttc acaatgggac cgcatgccac tgatgatacc ggggtctcca
2160
ggcagtcctg gggccaggtg aatgtgcgtc cttccctggc aggacaggcc tttgagtagg
2220
atggatggcc agtgcttcca gaatgtacca tggactagca tcgggggcag ggctgcggtg
2280
tctccagggg catcagctcc aacttaggta cctgcaggga atggccctgg ttggcccgga
2340
tgagaaggcc agtgctggga tcccccagct gcaggcgaa ccgctgcttc ctattggtgt
2400
ccaccacgcg ctgcacatct tcagcagaga agccgcggaa ctggggcaac tgcaggaggg
2460
tgcccagggg cacgaagcca tctgtgggca ggcagggtgc tcaggagcta accttgctct
2520
ggactgggcc agggttaaca gggagccaca ggcaaccgaa acaaagtctg ggcttggaga
2580
tcgcttgggc atcctctgtg ggacctttag aaagtctccc ctttctgggc cgcagttttc
2640
```

```
aacttacata aaaagaggat ctgcctcacg gaggggcagg gaggtgagtg cccagcatag
2700
cgctggcccg gagtgcac
2718
```

<210> 6292
<211> 497
<212> PRT
<213> Homo sapiens

<400> 6292

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Xaa Val Val Leu Ala Gly Gly Val Ala Pro Ala Leu Phe Arg Gly Met
1               5               10                  15
Pro Ala His Phe Ser Asp Ser Ala Gln Thr Glu Ala Cys Tyr His Met
            20              25                  30
Leu Ser Arg Pro Gln Pro Pro Asp Pro Leu Leu Leu Gln Arg Leu
        35              40                  45
Pro Arg Pro Ser Ser Leu Ser Asp Lys Thr Gln Leu His Ser Arg Trp
    50              55                  60
Leu Asp Ser Ser Arg Cys Leu Met Gln Gln Gly Ile Lys Ala Gly Asp
65              70              75                  80
Ala Leu Trp Leu Arg Phe Lys Tyr Tyr Ser Phe Phe Asp Leu Asp Pro
            85              90                  95
Lys Thr Asp Pro Val Arg Leu Thr Gln Leu Tyr Glu Gln Ala Arg Trp
        100             105                 110
Asp Leu Leu Leu Glu Glu Ile Asp Cys Thr Glu Glu Glu Met Met Val
        115             120                 125
Phe Ala Ala Leu Gln Tyr His Ile Asn Lys Leu Ser Gln Ser Gly Glu
        130             135                 140
Val Gly Glu Pro Ala Gly Thr Asp Pro Gly Leu Asp Asp Leu Asp Val
145             150             155                 160
Ala Leu Ser Asn Leu Glu Val Lys Leu Glu Gly Ser Ala Pro Thr Asp
            165             170                 175
Val Leu Asp Ser Leu Thr Thr Ile Pro Glu Leu Lys Asp Tyr Leu Arg
        180             185                 190
Ile Phe Arg Pro Arg Lys Leu Thr Leu Lys Gly Tyr Arg Gln His Trp
        195             200                 205
Val Val Phe Lys Glu Thr Thr Leu Ser Tyr Tyr Lys Ser Gln Asp Glu
    210             215                 220
Ala Pro Gly Asp Pro Ile Gln Gln Leu Asn Leu Lys Gly Cys Glu Val
225             230                 235                 240
Val Pro Asp Val Asn Val Ser Gly Gln Lys Phe Cys Ile Lys Leu Leu
            245             250                 255
Val Pro Ser Pro Glu Gly Met Ser Glu Ile Tyr Leu Arg Cys Gln Asp
            260             265                 270
Glu Gln Gln Tyr Ala Arg Trp Met Ala Gly Cys Arg Leu Ala Ser Lys
        275             280                 285
Gly Arg Thr Met Ala Asp Ser Ser Tyr Thr Ser Glu Val Gln Ala Ile
        290             295                 300
Leu Ala Phe Leu Ser Leu Gln His Gly Gln Trp Gly Pro Arg Gln Pro
305             310             315                 320
Pro Pro Arg Pro Asp Ala Ser Ala Glu Gly Leu Asn Pro Tyr Gly Leu
            325             330                 335
Val Ala Pro Arg Phe Gln Arg Lys Phe Lys Ala Lys Gln Leu Thr Pro
```

```
                340                345                 350
Arg Ile Leu Glu Ala His Gln Asn Val Ala Gln Leu Ser Leu Ala Glu
            355                360                365
Ala Gln Leu Arg Phe Ile Gln Ala Trp Gln Ser Leu Pro Asp Phe Gly
        370                375                380
Ile Ser Tyr Val Met Val Arg Phe Lys Gly Ser Arg Lys Asp Glu Ile
385                390                395                400
Leu Gly Ile Ala Asn Asn Arg Leu Ile Arg Ile Asp Leu Ala Val Gly
                405                410                415
Asp Val Val Lys Thr Trp Arg Phe Ser Asn Met Arg Gln Trp Asn Val
            420                425                430
Asn Trp Asp Ile Arg Gln Val Ala Ile Glu Phe Asp Glu His Ile Asn
            435                440                445
Val Ala Phe Ser Cys Val Ser Ala Ser Cys Arg Ile Val His Glu Tyr
        450                455                460
Ile Gly Gly Tyr Ile Phe Leu Ser Thr Arg Glu Arg Ala Arg Gly Glu
465                470                475                480
Glu Leu Asp Glu Asp Leu Phe Leu Gln Leu Thr Gly Gly His Glu Ala
                485                490                495
Phe
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<210> 6293
<211> 750
<212> DNA
<213> Homo sapiens

<400> 6293
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60
gacatctcgg gcgtgctgta cgacagcggc gcgtgcggcg gcacggccat cgccggctcg
120
gtggaggcgg tggccagact gaagcgttcc cggctgaagg tgaggttctg caccaacgag
180
tcgcagaagt cccgggcaga gctggtgggg cagcttcaga ggctgggatt tgacatctct
240
gagcaggagg taaccgcccc ggcaccagct gcctgccaga tcctgaagga gcgaggcctg
300
cgaccatacc tgctcatcca tgacggagtc cgctcagaat ttgatcagat cgacacatcc
360
aacccaaact gtgtggtaat tgcagacgca ggagaaagct tttcttatca aaacatgaat
420
aacgccttcc aggtgctcat ggagctggaa aaacctgtgc tcatatcact gggaaaaggg
480
cgttactaca aggagacctc tggcctgatg ctggacgttg gtccctacat gaaggcgctt
540
gagtatgcct gtggcatcaa agccgaggtg gtggggaagc cttctcctga gttttttcaag
600
tctgccctgc aagcgatagg agtggaagcc caccaggccg tcatgattgg ggacgatatc
660
gtgggcgacg tcggcggtgc ccagcggtgt ggaatgagag cgctgcaggt gcgcaccggg
720
aagttcaggc ccagtgacga gcaccatccg
750
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<210> 6294
<211> 250
<212> PRT
<213> Homo sapiens

<400> 6294
Xaa Pro Gly Ala Met Ala Pro Trp Gly Lys Arg Leu Ala Gly Val Arg
 1               5                  10                  15
Gly Val Leu Leu Asp Ile Ser Gly Val Leu Tyr Asp Ser Gly Ala Cys
            20                  25                  30
Gly Gly Thr Ala Ile Ala Gly Ser Val Glu Ala Val Ala Arg Leu Lys
         35                  40                  45
Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
      50                  55                  60
Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
65                  70                  75                  80
Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Ala Cys Gln Ile Leu Lys
                85                  90                  95
Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
            100                 105                 110
Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
         115                 120                 125
Asp Ala Gly Glu Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
      130                 135                 140
Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
145                 150                 155                 160
Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Val Gly Pro Tyr
               165                 170                 175
Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
            180                 185                 190
Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
         195                 200                 205
Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
      210                 215                 220
Gly Gly Ala Gln Arg Cys Gly Met Arg Ala Leu Gln Val Arg Thr Gly
225                 230                 235                 240
Lys Phe Arg Pro Ser Asp Glu His His Pro
               245                 250

<210> 6295
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6295
ggcgccgggg gcggggtgg gaggcggagg cggggccggg gcgccgcggg cggggcgccg
60
ggggcggggc gagtccggag gactcctcgg actgcgcgga acatggcgtt ctggggttgg
120
cgcgccgcgg cagccctccg gctgtggggc cgggtagttg aacgggtcga ggccggggga
180
ggcgtggggc cgtttcaggc ctgcggctgt cggctggtgc ttggcggcag ggacgatgtg
240
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```
agtgcggggc tgagaggcag ccatggggcc cgcggtgagc ccttggaccc ggcgcgcccc
300
ttgcagaggc ctcccagacc cgaggtgccc agggcattcc ggaggcagcc gagggcagca
360
gctcccagtt tcttcttttc gagtattaaa ggtggaagaa ggtccatatc tttttctgtg
420
ggtgcttcaa gtgttgttgg aagtggaggc agcagtgaca aggggaagct ttccctgcag
480
gatgtagctg agctgattcg ggccagagcc tgccagaggg tggtggtcat ggtggggggcc
540
ggcatcagca cacccagtgg cattccagac ttcagatcgc cggggagtgg cctgtacagc
600
aacctccagc agtacgatct cccgtacccc gaggccattt ttgaactccc attcttcttt
660
cacaacccca agcccttttt cactttggcc aaggagctgt accctggaaa ctacaagccc
720
aacgtcactc actactttct ccggctgctt catgacaagg ggctgcttct gcggctctac
780
acgcagaaca tcgatgggct tgagagagtg tcgggcatcc ctgcctcaaa gctggttgaa
840
gctcatggaa cctttgcctc tgccacctgc acagtctgcc aaagaccctt cccaggggag
900
gacattcggg ctgacgtgat ggcagacagg gttccccgct gcccggtctg caccggcgtt
960
gtgaagcccg acattgtgtt ctttggggag ccgctgcccc agaggttctt gctgcatgtg
1020
gttgatttcc ccatggcaga tctgctgctc atccttggga cctccctgga ggtggagcct
1080
tttgccagct tgaccgaggc cgtgcggagc tcagttcccc gactgctcat caaccgggac
1140
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1200
gttcacggcg tggaaagcct agtggagctt ctgggctgga cagaagagat gcgggacctt
1260
gtgcagcggg aaactgggaa gcttgatgga ccagacaaat aggatgatgg cttgaccgag
1320
gccgtgcgga cgtcagttcc ccgactgctc atcaaccggg acttggtggg gcccttggct
1380
tggcatcctc gcagcaggga cgtggcccag ctggggacg tggttcacgg cgtggaaagc
1440
ctagtggagc ttctgggctg gacagaagag atgcgggacc ttgtgcagcg ggaaactggg
1500
aagcttgatg gaccagacaa ataggatgat ggctgccccc acacaataaa tggtaacata
1560
ggagacatcc acatcccaat tctgacaaga cctcatgcct gaagacagct tgggcaggtg
1620
aaaccagaat atgtgaactg agtggacacc cgaggctgcc actggaatgt cttctcaggc
1680
catgagctgc agtgactggt agggctgtgt ttacagtcag gccacccccg tcacatatac
1740
aaaggagctg cctgcctgtt tgctgtgttg aactcttcac tctgctgaag ctcctaatgg
1800
aaaaagcttt cttctgactg tgaccctctt gaactgaatc agaccaactg gaatcccaga
1860
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ccgagtctgc tttctgtgcc tagttgaacg gcaagctcgg catctgttgg ttacaagatc
1920
cagacttggg ccgagcggtc cccagccctc ttcatgttcc gaagtgtagt cttgaggccc
1980
tggtgccgca cttctagcat gttggtctcc tttagtgggg ctatttttaa tgagagaaaa
2040
tctgttcttt ccagcatgaa atacatttag tctcctcaaa aaaaaaaac a
2091
```

<210> 6296
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6296

```
Met Ala Phe Trp Gly Trp Arg Ala Ala Ala Ala Leu Arg Leu Trp Gly
 1               5                  10                  15
Arg Val Val Glu Arg Val Glu Ala Gly Gly Gly Val Gly Pro Phe Gln
            20                  25              30
Ala Cys Gly Cys Arg Leu Val Leu Gly Gly Arg Asp Asp Val Ser Ala
            35                  40                  45
Gly Leu Arg Gly Ser His Gly Ala Arg Gly Glu Pro Leu Asp Pro Ala
        50                  55                  60
Arg Pro Leu Gln Arg Pro Pro Arg Pro Glu Val Pro Arg Ala Phe Arg
65                  70                  75                  80
Arg Gln Pro Arg Ala Ala Ala Pro Ser Phe Phe Phe Ser Ser Ile Lys
                85                  90                  95
Gly Gly Arg Arg Ser Ile Ser Phe Ser Val Gly Ala Ser Ser Val Val
            100                 105                 110
Gly Ser Gly Gly Ser Ser Asp Lys Gly Lys Leu Ser Leu Gln Asp Val
        115                 120                 125
Ala Glu Leu Ile Arg Ala Arg Ala Cys Gln Arg Val Val Val Met Val
    130                 135                 140
Gly Ala Gly Ile Ser Thr Pro Ser Gly Ile Pro Asp Phe Arg Ser Pro
145                 150                 155                 160
Gly Ser Gly Leu Tyr Ser Asn Leu Gln Gln Tyr Asp Leu Pro Tyr Pro
                165                 170                 175
Glu Ala Ile Phe Glu Leu Pro Phe Phe Phe His Asn Pro Lys Pro Phe
                180                 185                 190
Phe Thr Leu Ala Lys Glu Leu Tyr Pro Gly Asn Tyr Lys Pro Asn Val
            195                 200                 205
Thr His Tyr Phe Leu Arg Leu Leu His Asp Lys Gly Leu Leu Leu Arg
    210                 215                 220
Leu Tyr Thr Gln Asn Ile Asp Gly Leu Glu Arg Val Ser Gly Ile Pro
225                 230                 235                 240
Ala Ser Lys Leu Val Glu Ala His Gly Thr Phe Ala Ser Ala Thr Cys
                245                 250                 255
Thr Val Cys Gln Arg Pro Phe Pro Gly Glu Asp Ile Arg Ala Asp Val
            260                 265                 270
Met Ala Asp Arg Val Pro Arg Cys Pro Val Cys Thr Gly Val Val Lys
            275                 280                 285
Pro Asp Ile Val Phe Phe Gly Glu Pro Leu Pro Gln Arg Phe Leu Leu
    290                 295                 300
His Val Val Asp Phe Pro Met Ala Asp Leu Leu Leu Ile Leu Gly Thr
```

```
305                    310                    315                    320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
                   325                    330                    335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
               340                    345                    350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
           355                    360                    365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
       370                    375                    380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
385                    390                    395
```

<210> 6297
<211> 472
<212> DNA
<213> Homo sapiens

<400> 6297
ngggg´ccgct ggccgagagg ctgaggcggc gtcatgtcct ccgaggtgtc cgcgcgccgc
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gacgccaaga agctggtgcg ctccccgagc ggcctgcgca tggtgcccga acaccgcgcc
120
ttcggaagcc cgttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
tgtatgcagt gtgacgccaa gtttgacttt ctcaccagaa agcaccactg tcgccgctgc
240
gggaagtgct ctgcgacag gtgctgcagc cagaaggtgc cgctgcggcg catgtgcttt
300
gtggaccccg tgcggcagtg cgcggagtgc gccctggtgt ccctcaagga ggcggagttc
360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtcctgc
420
gcgctccgcc agccggctcc tcgtgtctgt ggcgatgctg tgggctgtgc ac
472

<210> 6298
<211> 146
<212> PRT
<213> Homo sapiens

<400> 6298
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Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
 1                   5                   10                   15
Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
               20                   25                   30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
           35                   40                   45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
       50                   55                   60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65                   70                   75                   80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
               85                   90                   95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
```

```
                    100                   105                110
        Gln Leu Lys Val Leu Leu Ser Gly Lys Asp Gly Cys Pro Ala Gln Ser
                115                   120                125
        Cys Ala Leu Arg Gln Pro Ala Pro Arg Val Cys Gly Asp Ala Val Gly
            130                   135                140
        Cys Ala
        145
```

<210> 6299
<211> 1466
<212> DNA
<213> Homo sapiens

<400> 6299

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ctgattccgg gctgtcatgg cgacccccaa caatctgacc cccaccaact gcagctggtg
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gcccatctcc gcgctggaga gcgatgcggc caagccagcg gaggcccccg acgctcccga
120
ggcggccagc ccgcccattg gcccagggag agcctggttc tgtaccactg gacccagtcc
180
ttcagctcgc agaaggtgcg gctggtgatc gccgagaagg gcctggtgtg cgaggagcgg
240
gacgtgagcc tgccacagag cgagcacaag gagccctggt tcatgcggct caacctgggc
300
gaggaggtgc ccgtcatcat ccaccgcgac aacatcatca gtgactatga ccagatcatt
360
gactatgtgg agcgcacctt cacaggagag cacgtggtgg ccctgatgcc cgaggtgggc
420
agcctgcagc acgcacgggt gctgcagtac cgggagctgc tggacgcact gcccatggat
480
gcctacacgc atggctgcat cctgcatccc gagctcacca ccgactccat gatccccaag
540
tacgccacgg ccgagatccg cagacattta gccaatgcca ccacggacct catgaaactg
600
gaccatgaag aggagcccca gctctccgag ccctaccttt ctaaacaaaa gaagctcatg
660
gccaagatct tggagcatga tgatgtgagc tacctgaaga agatcctcgg ggaactggcc
720
atggtgctgg accagattga ggcggagctg agaagagga agctggagaa cgaggggcag
780
aaatgcgagc tgtggctctg tggctgtgcc ttcaccctcg ctgatgtcct cctgggagcc
840
accctgcacc gcctcaagtt cctgggactg tccaagaaat actgggaaga tggcagccgg
900
cccaacctgc agtccttctt tgagagggtc cagagacgct ttgccttccg gaaagtcctg
960
ggtgacatcc acaccaccct gctgtcggcc gtcatcccca atgctttccg gctggtcaag
1020
aggaaacccc catccttctt cggggcgtcc ttcctcatgg gctccctggg tgggatgggc
1080
tactttgcct actggtacct caagaaaaaa tacatctagg ccaggcctg gggcttggtg
1140
tctgactgtc ggtgtctctg tgctgtgtga ttccccgtga gctctcagta actcactgtc
1200
```

tcatgaacac ttggacagcc ctccccgccc ttcgttctga gtaataatac cgtcagtgtg
1260
aaaacattcc gtagtttaga agtagacgtt gcaaatgctg tgactcaagg ccacggctct
1320
gctaaaagag agagaaggaa cgagagagag agagaaaaaa caaaaaacca gaaaaccacg
1380
aatgcctttt tctatcgatt tcaaggtctc aagatgggaa ctgtgggaga ctgggttagg
1440
atctgagggg aactctttca caggga
1466

<210> 6300
<211> 372
<212> PRT
<213> Homo sapiens

<400> 6300
Leu Ile Pro Gly Cys His Gly Asp Pro Gln Gln Ser Asp Pro His Gln
 1   5   10   15
Leu Gln Leu Val Ala His Leu Arg Ala Gly Glu Arg Cys Gly Gln Ala
                20   25   30
Ser Gly Gly Pro Arg Arg Ser Arg Gly Gly Gln Pro Ala His Trp Pro
            35   40   45
Arg Glu Ser Leu Val Leu Tyr His Trp Thr Gln Ser Phe Ser Ser Gln
        50   55   60
Lys Val Arg Leu Val Ile Ala Glu Lys Gly Leu Val Cys Glu Glu Arg
65   70   75   80
Asp Val Ser Leu Pro Gln Ser Glu His Lys Glu Pro Trp Phe Met Arg
                85   90   95
Leu Asn Leu Gly Glu Glu Val Pro Val Ile Ile His Arg Asp Asn Ile
                100   105   110
Ile Ser Asp Tyr Asp Gln Ile Ile Asp Tyr Val Glu Arg Thr Phe Thr
            115   120   125
Gly Glu His Val Val Ala Leu Met Pro Glu Val Gly Ser Leu Gln His
        130   135   140
Ala Arg Val Leu Gln Tyr Arg Glu Leu Leu Asp Ala Leu Pro Met Asp
145   150   155   160
Ala Tyr Thr His Gly Cys Ile Leu His Pro Glu Leu Thr Thr Asp Ser
                165   170   175
Met Ile Pro Lys Tyr Ala Thr Ala Glu Ile Arg Arg His Leu Ala Asn
                180   185   190
Ala Thr Thr Asp Leu Met Lys Leu Asp His Glu Glu Glu Pro Gln Leu
            195   200   205
Ser Glu Pro Tyr Leu Ser Lys Gln Lys Lys Leu Met Ala Lys Ile Leu
        210   215   220
Glu His Asp Asp Val Ser Tyr Leu Lys Lys Ile Leu Gly Glu Leu Ala
225   230   235   240
Met Val Leu Asp Gln Ile Glu Ala Glu Leu Glu Lys Arg Lys Leu Glu
                245   250   255
Asn Glu Gly Gln Lys Cys Glu Leu Trp Leu Cys Gly Cys Ala Phe Thr
                260   265   270
Leu Ala Asp Val Leu Leu Gly Ala Thr Leu His Arg Leu Lys Phe Leu
            275   280   285
Gly Leu Ser Lys Lys Tyr Trp Glu Asp Gly Ser Arg Pro Asn Leu Gln

```
     290                     295                     300
Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu
305                     310                     315                 320
Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe
                325                     330                     335
Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu
                340                     345                     350
Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys
          355                     360                     365
Lys Lys Tyr Ile
      370


<210> 6301
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6301
nnacgggttt tagaaaaaca agaattacag cagccaacct atgttgccct gagttacata
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aatagattca tgacagatgc tgcccgccga gagcaggagt ccctaaagaa gaagattcag
120
ccgaagctct cgctgactct gtccagctca gtgtctcgag ggaatgtgtc cactccccca
180
cgccacagca gtggaagcct tactcccccc gtgaccccac ccatcacccc ctcctcttca
240
ttccgcagca gcactccgac aggcagcgag tatgacgagg aggaggtgga ctatgaggag
300
tcggacagcg atgagtcctg gaccacagag agtgccatca gctccgaagc catcctcagc
360
tccatgtgca tgaatggagg ggaagagaag ccttttgcct gcccagttcc tggatgtaaa
420
aagagataca agaatgtgaa tggcataaag tatcacgcta agaatggtca cagaacacag
480
attcgtgtcc gcaaaccatt caagtgtcgc tgtgggaaga gttacaagac agctcagggc
540
ctgcggcacc acacaatcaa tttccatccc ccggtgtcgg ctgagattat caggaagatg
600
cagcaataac atgctggtca taactgtgcc aagaaatcct caccagcagt tgctgatttt
660
gaaaacagcc accttttttc aggggaagca ttcagcaacc ctttaaagaa aaagaattaa
720
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780
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<210> 6302
<211> 202
<212> PRT
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<213> Homo sapiens

<400> 6302
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            20   25   30
Glu Ser Leu Lys Lys Lys Ile Gln Pro Lys Leu Ser Leu Thr Leu Ser
         35   40   45
Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
      50   55   60
Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
65   70   75   80
Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
               85   90   95
Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
            100   105   110
Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
         115   120   125
Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
      130   135   140
Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
145   150   155   160
Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
               165   170   175
Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
            180   185   190
Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
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<210> 6303
<211> 676
<212> DNA
<213> Homo sapiens

<400> 6303
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120
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360
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420
gaaagagtca aaggacctgt aggaagccta agtctgtgg aagctattct agaagaaagc
480
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540

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676


<210> 6304
<211> 181
<212> PRT
<213> Homo sapiens


<400> 6304
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Val Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys
            20                  25                  30
Val Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala
        35.                 40                  45
Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
        50                  55                  60
Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
65                  70                  75                  80
Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
                85                  90                  95
Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala
            100                 105                 110
Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
            115                 120                 125
Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
            130                 135                 140
Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
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Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
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Glu Lys Phe Ser Val
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<210> 6305
<211> 3853
<212> DNA
<213> Homo sapiens


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5487

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<210> 6306
<211> 474
<212> PRT
<213> Homo sapiens

<400> 6306
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            20   25   30
Thr Trp Asp Ser Thr Phe Cys Ala Val Asn Pro Lys Phe Leu Ala Val
            35   40   45
Ile Val Glu Ala Ser Gly Gly Gly Ala Phe Leu Val Leu Pro Leu Ser
        50   55   60
Lys Thr Gly Arg Ile Asp Lys Ala Tyr Pro Thr Val Cys Gly His Thr
65   70   75   80
Gly Pro Val Leu Asp Ile Asp Trp Cys Pro His Asn Asp Gln Val Ile
                85   90   95
Ala Ser Gly Ser Glu Asp Cys Thr Val Met Val Trp Gln Ile Pro Glu
            100   105   110
Asn Gly Leu Thr Ser Pro Leu Thr Glu Pro Val Val Val Leu Glu Gly
            115   120   125
His Thr Lys Arg Val Gly Ile Ile Ala Trp His Pro Thr Ala Arg Asn
        130   135   140
Val Leu Leu Ser Ala Gly Cys Asp Asn Val Val Leu Ile Trp Asn Val
145   150   155   160
Gly Thr Ala Glu Glu Leu Tyr Arg Leu Asp Ser Leu His Pro Asp Leu
                165   170   175
Ile Tyr Asn Val Ser Trp Asn His Asn Gly Ser Leu Phe Cys Ser Ala
                180   185   190
Cys Lys Asp Lys Ser Val Arg Ile Ile Asp Pro Arg Arg Gly Thr Leu
            195   200   205
Val Ala Glu Arg Glu Lys Ala His Glu Gly Ala Arg Pro Met Arg Ala
        210   215   220
Ile Phe Leu Ala Asp Gly Lys Val Phe Thr Thr Gly Phe Ser Arg Met
225   230   235   240
Ser Glu Arg Gln Leu Ala Leu Trp Asn Pro Lys Asn Met Gln Glu Pro
                245   250   255
Ile Ala Leu His Glu Met Asp Thr Ser Asn Gly Val Leu Leu Pro Phe
                260   265   270
Tyr Asp Pro Asp Thr Ser Ile Ile Tyr Leu Cys Gly Lys Gly Asp Ser

5490

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Ser Ile Arg Tyr Phe Glu Ile Thr Asp Glu Ser Pro Tyr Val His Tyr
          290                      295                      300
Leu Asn Thr Phe Ser Ser Lys Glu Pro Gln Arg Gly Met Gly Tyr Met
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Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe
                    325                      330                      335
Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg
                    340                      345                      350
Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro
                    355                      360                      365
Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp
          370                      375                      380
Pro Ile Leu Ile Ser Leu Lys His Gly Tyr Ile Pro Gly Lys Asn Arg
385                      390                      395                      400
Asp Leu Lys Val Val Lys Lys Asn Ile Leu Asp Ser Lys Pro Thr Ala
                    405                      410                      415
Asn Lys Lys Cys Asp Leu Ile Ser Ile Pro Lys Lys Thr Thr Asp Thr
                    420                      425                      430
Ala Ser Val Gln Asn Glu Ala Lys Leu Asp Glu Ile Leu Lys Glu Ile
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465                      470


<210> 6307
<211> 2119
<212> DNA
<213> Homo sapiens

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660
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2119

<210> 6308
<211> 483
<212> PRT

<213> Homo sapiens

<400> 6308

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Trp	Gln	Ser 35	Tyr	Leu	Gln	Gly	Gln 40	Met	Ile	Ser	Ala	Glu 45	Asp	Cys	Glu
Phe	Ile 50	Gln	Arg	Phe	Glu	Met 55	Lys	Arg	Ser	Pro	Glu 60	Glu	Lys	Gln	Glu
Met 65	Leu	Gln	Thr	Glu	Gly 70	Ser	Gln	Cys	Ala	Lys 75	Thr	Phe	Ile	Asn	Leu 80
Met	Thr	His	Ile	Cys 85	Lys	Glu	Gln	Thr	Val 90	Gln	Tyr	Ile	Leu	Thr 95	Met
Val	Asp	Asp	Met 100	Leu	Gln	Glu	Asn	His 105	Gln	Arg	Val	Ser	Ile 110	Phe	Phe
Asp	Tyr	Ala 115	Arg	Cys	Ser	Lys	Asn 120	Thr	Ala	Trp	Pro	Tyr 125	Phe	Leu	Pro
Met	Leu 130	Asn	Arg	Gln	Asp	Pro 135	Phe	Thr	Val	His	Met 140	Ala	Ala	Arg	Ile
Ile 145	Ala	Lys	Leu	Ala	Ala 150	Trp	Gly	Lys	Glu	Leu 155	Met	Glu	Gly	Ser	Asp 160
Leu	Asn	Tyr	Tyr	Phe 165	Asn	Trp	Ile	Lys	Thr 170	Gln	Leu	Ser	Ser	Gln 175	Lys
Leu	Arg	Gly	Ser 180	Gly	Val	Ala	Val	Glu 185	Thr	Gly	Thr	Val	Ser 190	Ser	Ser
Asp	Ser	Ser 195	Gln	Tyr	Val	Gln	Cys 200	Val	Ala	Gly	Cys	Leu 205	Gln	Leu	Met
Leu	Arg 210	Val	Asn	Glu	Tyr	Arg 215	Phe	Ala	Trp	Val	Glu 220	Ala	Asp	Gly	Val
Asn 225	Cys	Ile	Met	Gly	Val 230	Leu	Ser	Asn	Lys	Cys 235	Gly	Phe	Gln	Leu	Gln 240
Tyr	Gln	Met	Ile	Phe 245	Ser	Ile	Trp	Leu	Leu 250	Ala	Phe	Ser	Pro	Gln 255	Met
Cys	Glu	His	Leu 260	Arg	Arg	Tyr	Asn	Ile 265	Ile	Pro	Val	Leu	Ser 270	Asp	Ile
Leu	Gln	Glu	Ser 275	Val	Lys	Glu	Lys 280	Val	Thr	Arg	Ile	Ile 285	Leu	Ala	Ala
Phe	Arg 290	Asn	Phe	Leu	Glu	Lys 295	Ser	Thr	Glu	Arg	Glu 300	Thr	Arg	Gln	Glu
Tyr 305	Ala	Leu	Ala	Met	Ile 310	Gln	Cys	Lys	Val	Leu 315	Lys	Gln	Leu	Glu	Asn 320
Leu	Glu	Gln	Gln	Lys 325	Tyr	Asp	Asp	Glu	Asp 330	Ile	Ser	Glu	Asp	Ile 335	Lys
Phe	Leu	Leu	Glu	Lys 340	Leu	Gly	Glu	Ser	Val 345	Gln	Asp	Leu	Ser	Ser 350	Phe
Asp	Glu	Tyr 355	Ser	Ser	Glu	Leu	Lys 360	Ser	Gly	Arg	Leu	Glu 365	Trp	Ser	Pro
Val	His 370	Lys	Ser	Glu	Lys	Phe 375	Trp	Arg	Glu	Asn	Ala 380	Val	Arg	Leu	Asn
Glu 385	Lys	Asn	Tyr	Glu	Leu 390	Leu	Lys	Ile	Leu	Thr 395	Lys	Leu	Leu	Glu	Val 400
Ser	Asp	Asp	Pro	Gln	Val	Leu	Ala	Val	Ala	Ala	His	Asp	Val	Gly	Glu

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Tyr Val Arg His Tyr Pro Arg Gly Lys Arg Val Ile Glu Gln Leu Gly
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Gly Lys Gln Leu Val Met Asn His Met His His Glu Asp Gln Gln Val
             435                    440                    445
Arg Tyr Asn Ala Leu Leu Ala Val Gln Lys Leu Met Val His Asn Trp
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<210> 6309
<211> 564
<212> DNA
<213> Homo sapiens


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<210> 6310
<211> 83
<212> PRT
<213> Homo sapiens


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Leu Gln Glu Ala Arg Pro Leu Gly Leu Leu Val Pro Asp Ala Gly Asp
             35                  40                  45
Leu Arg Leu Pro Glu Pro Gln Leu Leu Pro Glu Arg Arg Val Leu Ala
      50                  55                  60
Leu Pro Val Gln Gln Arg Asp Leu Ser Ser Leu Glu Pro Pro Pro Pro
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 65                70             ·75                 . 80
Arg Phe Glu


<210> 6311
<211> 1548
<212> DNA
<213> Homo sapiens

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65   70   75   80
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Asn Arg Gly Pro Lys Arg Pro Lys Val Leu Gln Arg Gly Arg Leu Tyr
            100   105   110
His Leu Gln Thr Asn Lys Cys Leu Val Ala Gln Gly Arg Pro Ser Gln
            115   120   125
Lys Gly Gly Leu Val Val Leu Lys Ala Cys Asp Tyr Ser Asp Pro Asn
        130   135   140
Gln Ile Trp Ile Tyr Asn Glu Glu His Glu Leu Val Leu Asn Ser Leu
145   150   155   160
Leu Cys Leu Asp Met Ser Glu Thr Arg Ser Ser Asp Pro Pro Arg Leu
                165   170   175
Met Lys Cys His Gly Ser Gly Gly Ser Gln Gln Trp Thr Phe Gly Lys
                180   185   190
Asn Asn Arg Leu Tyr Gln Val Ser Val Gly Gln Cys Leu Arg Ala Val
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Asp Pro Leu Gly Gln Lys Gly Ser Val Ala Met Ala Ile Cys Asp Gly
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225   230

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5496

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                35                  40                  45
Glu Val Lys Gly Glu Ile Ala Arg Lys Asp Glu Lys Leu Leu Ser Phe
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                100                 105                 110
Lys Ile Ser Ile Val Glu Ala Leu Thr Leu Leu Asn Asn His Lys Leu
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Phe Pro Glu Thr Trp Thr Ala Glu Lys Ile Met Gln Glu Tyr Gln Leu
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        35                  40                  45
Asp Glu Ala Asp Glu Lys Gly Trp Phe Pro Leu His Glu Ala Val Val
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Gln Pro Ile Gln Gln Ile Leu Glu Ile Val Leu Asp Ala Ser Tyr Lys
65                  70                  75                  80
Thr Leu Trp Glu Phe Lys Thr Cys Asp Gly Glu Thr Pro Leu Thr Leu
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        50                  55                  60
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Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn Arg Arg
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            20                  25                  30
Gln Met Lys Leu Lys Glu Arg Gln Lys Phe Phe Glu Glu Ala Phe Gln
            35                  40                  45
Gln Asp Met Glu Gln Gln Tyr Leu Ser Thr Gly Tyr Leu Gln Ile Ala
        50                  55                  60
Glu Arg Arg Glu Pro Ile Gly Ser Met Ser Ser Met Glu Val Asn Val
65                  70                  75                  80
Asp Met Leu Glu Gln Met Asp Leu Met Asp Ile Ser Asp Gln Glu Ala
                85                  90                  95
Leu Asp Val Phe Leu Asn Ser Gly Gly Glu Glu Asn Thr Val Leu Ser
            100                 105                 110
Pro Ala Leu Gly Pro Glu Ser Ser Thr Cys Gln Asn Glu Ile Thr Leu
            115                 120                 125
Gln Val Pro Asn Pro Ser Glu Leu Arg Ala Lys Pro Pro Ser Ser Ser
    130                 135                 140
Ser Thr Cys Thr Asp Ser Ala Thr Arg Asp Ile Ser Glu Gly Gly Glu
145                 150                 155                 160
Ser Pro Val Val Gln Ser Asp Glu Glu Glu Val Gln Val Asp Thr Ala
                165                 170                 175
Leu Ala Thr Ser His Thr Asp Arg Glu Ala Thr Pro Asp Gly Gly Glu
            180                 185                 190
Asp Ser Asp Ser
            195
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What is claimed is:

1.   An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

2.   The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

3.   The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of SEQ ID NO: 2n.

4.   The isolated nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

5.   The isolated nucleic acid molecule of claim 1, wherein said molecule comprise the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n any integer 1-3161, or the complement thereof.

6.   An oligonucleotide less than 100 nucleotides in length and comprising at least contiguous nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n is a integer 1-3161, or the complement thereof.

7.   A vector comprising the nucleic acid molecule of claim 1.

8. The vector of claim 7, wherein said vector is an expression vector.

9 A host cell comprising the isolated nucleic acid molecule of claim 1.

10. A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: $2n$, wherein n is any integer 1-3161.

11. The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: $2n$, wherein n is any integer 1-3161.

12. An antibody that selectively binds to the polypeptide of claim 10.

13. A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
a) the nucleic acid of claim 1;
b) the polypeptide of claim 10; and
c) the antibody of claim 12;
and a pharmaceutically acceptable carrier.

14. A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.

15. A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.

16. A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

compound. and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17.   A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe c primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18.   A method for modulating the activity of the polypeptide of claim 10, the methoc comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptid

19..   The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected fro the group consisting of:
   a)   the nucleic acid of claim 1;
   b)   the polypeptide of claim 10; and
   c)   the antibody of claim 12.

20.   A method for screening for a modulator of activity or of latency or predispositio to an ORFX-associated disorder, said method comprising:
   a)   contacting a test compound with the polypeptide of claim 10; and
   b)   determining if said test compound binds to said polypeptide,
wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21.   A method for screening for a modulator of activity or of latency or predispositio to an ORFX-associated disorder, said method comprising:
   a)   administering a test compound to a test subject at an increased risk ORFX-
           associated disorder, wherein said test subject recombinantly expresses a
           polypeptide encoded by the nucleotide of claim 1;

b)   measuring expression the activity of said protein in said test subject;

c)   measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and

d)   comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predispostition to an ORFX-associated disorder.

22.   The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23.   A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

a)   measuring the amount of the polypeptide in a sample from said subject; and

b)   comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24.   The method of claim 23, wherein said subject is a human.

25.   A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

a)   measuring the amount of the nucleic acid in a sample from the mammalian subject; and

b)   comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of the nucleic acid in step (a) as compared to the coi sample indicates the presence of or predisposition to said disease in said subject.

26.   The method of claim 25, wherein said subject is a human.

27.   A method of treating or preventing a pathological condition associated with ai ORFX-associated disorder in a subject, the method comprising administering to said subject polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological condition.

28.   The method of claim 27, wherein said subject is a human.

29.   A method of treating or preventing a pathological condition associated with ai ORFX-associated disorder in a subject, the method comprising administering to said subject nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said patholog: condition.

30.   The method of claim 29, wherein said subject is a human.

31.   A method of treating or preventing a pathological condition associated with ar ORFX-associated disorder in a subject, the method comprising administering to said subject 1 antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological conditio

32.   The method of claim 31, wherein said subject is a human.